Language and Emotion

An International Handbook

Volume 2

Edited by
Gesine Lenore Schiewer
Jeanette Altarriba
Bee Chin Ng

Handbooks of Linguistics and Communication Science
Handbücher zur Sprach- und Kommunikationswissenschaft

HSK 46.2

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VIII Communication and emotion in written language

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Arlene Clachar

33 Text production, text reception, and emotion

1 Introduction
2 Background
3 Research questions
4 Participants
5 Text production and text reception in digitally mediated communication
6 Collection of data
7 Analysis of data and discussion of findings
8 Conclusion
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Abstract: This chapter takes the position that text production and text reception in the form of narrative stories are useful in understanding how multilinguals use emotion vocabulary in constructing identities since narratives shed light on how individuals use language to shape their lived, emotional experiences. The chapter examines how Puerto Rican return migrant students use emotional language as they construct Hip Hop identities through narrative stories in digitally mediated communication such as emails and websites. The chapter also focuses on how the electronic and interactive features of digitally mediated communication facilitate the use of emotional language in text production and text reception as Puerto Rican return migrant students engage in translanguaging in narratives to index Hip Hop identities. Results indicate that Puerto Rican return migrant students use emotional language in Standard English and African American English but not in Spanish when translanguaging in text production and text reception. Factors such as topic, language proficiency, and sociocultural competence contribute to this outcome. The electronic and interactive characteristics of emails and websites in digitally mediated communication seemed to influence interaction among text production, text reception and emotion vocabulary. Additionally, these characteristics spurred Puerto Rican return migrant students' engagement in the acquisition of lexico-grammatical features of academic language in text production and text reception.

Keywords: emotions, narratives, written communication, linguistic identity, social media, translanguaging, text reception

1 Introduction

When individuals write – whether they are considered by others or perceive themselves to be authors, researchers, students, journalists, commentators, bloggers on social media, novelists, etc. – they write with a purpose. They write because they know that what they

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write will be read and reacted to – e.g., in order to impart knowledge; entertain; coerce readers to accept or reject their social and political ideologies; satirize events; index their ethnic, cultural, or racial identities; or express a range of emotions from effusive satisfaction to seething dissatisfaction. In high-stakes testing, individuals write to prove that they have met the academic hallmarks set by educational institutions. The purposes are many, but cognitively, the reason is the same: Human beings write in order "to do something" designed to bring about "changes", whether explicitly or implicitly, actively or passively. Writing involves strategic options and purposed choices. When writers produce texts, they are not only transferring information to their intended audience or readers; they are also achieving communicative objectives with the aim of providing themselves with a voice and thus, a sense of empowerment. Thus, as writers and readers communicate with one another through narratives, they both engage in complementary product and process – writers engage in *text production*, readers process the text and respond to writers in the form of written *text reception*.

Related to communicative objectives of writing is the fact that people increasingly live their lives in more than one place, often beyond national boundaries, allowing for an unprecedented variety of new forms of contact, socialization and communication (Leung and Valdés 2019). The transnational processes in which people from different national, ethnic, cultural, and linguistic backgrounds move across their traditional group boundaries to get into close contact with one another are also transforming the communicative environment. Bilingualism and multilingualism play an essential role in the interchanges between individuals of different backgrounds and make it possible for people who may not share ideological assumptions or values to (re-)negotiate their identities (May 2014). Due to this growing linguistic diversity, recent scholarship has begun to examine how bilingual and multilingual students in classrooms can use their full range of linguistic repertoires as they develop writing skills. Following Smith, Pacheco, and Rossato de Almeida (2017), I will use the notion of translanguaging to capture both the writing practices of multilinguals and the capacity of immigrants to mobilize their linguistic resources to create new social spaces for themselves.

Because translanguaging involves the encounter of individuals from a variety of linguistic backgrounds, and often the mixing of multiple languages, translanguaging has become a phenomenon for examining the connection among text production, text reception and emotion in multilingualism (Hawkins and Mori 2018). This chapter examines how multilinguals use emotion vocabulary in translanguaging in text production and text reception as they attempt to construct identities in narratives. Since emotion vocabulary is influenced by sociocultural competence, language proficiency and topic, it may be subjected to different constraints as multilinguals use and respond to translanguaging in text production and text reception (see also Dewaele and Pavlenko 2002). In the background section which follows, I first describe my operational definition of narrative stories as forms of text production and text reception. I then introduce the concept of translanguaging as the means by which students use multiple languages in written narrative stories to account for their emotional involvement in Hip Hop identities. In the last section of the background, I briefly discuss sociocultural competence, language proficiency and topic – factors that are known to have an impact on students' use of emotional language.

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2 Background

2.1 Narratives

In written narratives the storyteller or writer is analogous to text production and the intended audience or reader is synonymous with text reception. There is an important relationship between the storyteller and the reader who are both seeking a human connection and, in many cases, are striving for an emotional response. In addition, narratives call for the construction of the self and frequently lead to co-constructed interaction. For example, marginalized groups frequently embody knowledge in narrative forms (Canagarajah 1996). This chapter views narratives as text production constructed by the storyteller or the writer in conjunction with text reception, a concept which entails how the audience or reader interprets, addresses or contests the content of text production. The chapter takes the comparable position that just as writers and readers represent interlocutors in meaningful written communication, text production and text reception represent interlocutors engaged in meaningful, co-constructed conversation through written narrative. Traditionally, much of narrative research has focused on what could be called prototypical large stories which are based on culminations of autobiographical life histories, delving into non-shared personal experiences (Georgakopoulou 2006). Underrepresented in the research are narratives as small stories (Bamberg 2004; Georgakopoulou 2006).

Narratives as small stories (that is, stories told in everyday conversational contexts) offer ways into examining how storytellers or writers use text to manage a sense of themselves and construct their identities in emotional contexts (Levine 2015). Thus, narratives as small stories embody text production and text reception, both of which elicit, co-construct, interpret, and represent people's accounts of personal experiences. These practices encompass complex identity and emotional responsibilities (Barkhuizen 2011). In the process of constructing narratives as short stories, writers, through text production, make sense of their lived emotional experiences, and readers, through text reception, feel empathy, understand emotions, make connections with emotions, and unravel emotional complexities. Conversely, given the nature of emotions, narratives, through text production and text reception, "can confront disconnections and uncertainties" (Barkhuizen 2011: 393). Burger and Quinney state that the power of narrative small stories "evoke[s] the vividness of lived experience" (Burger and Quinney 2004: 1). As both the creators and receivers of narrative small stories, humans recognize a fundamental guiding principle through which their subjectivities are formed and they come to ascribe meanings and values to the events and actions of their lives (Cadman and Brown 2011). This chapter takes the position that narrative stories create the contexts for positionality: that is, the position that writers, through text production, and readers, through text reception, adopt their identities in relation to one another and respond emotionally to processes of language use. As such, text production and text reception in the form of narrative stories are useful in understanding how multilinguals use emotion vocabulary as they attempt to construct their identities.

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2.2 Translanguaging

With growing linguistic diversity in classrooms, recent research has begun to focus on how multilingual students can use the full range of their linguistic repertoires in both text production and text reception. Research has begun to explore the communicative potential of translanguaging, that is, the movement across multiple languages and/or dialects to construct identities and emotions in their narrative stories. Building on Wei's (2011) definition of translanguaging, I refer to the process as the use of language to gain knowledge, articulate one's thoughts, or communicate about using language. In this process, "language serves as a vehicle through which thinking is articulated and transformed into an artifactual form" (Swain 2006: 97). Translanguaging is both going between different linguistic structures and systems and going beyond them (Wei 2018). It includes the full range of linguistic performances of multilingual individuals for purposes that transcend the combination of linguistic structures, the alternation between language systems, the transmission of information, and the representation of values, identities, and emotions (Otheguy, García, and Reid 2015). Translanguaging differs from codeswitching between languages in that translanguaging is transformative in nature (Wei 2011). According to Wei (2011), translanguaging creates a social space for multilingual individuals by bringing together different dimensions of their personal histories, their experiences and environments, their attitudes, and their ideologies into one coordinated meaningful language performance. Wei calls this meaningful performance "'translanguaging space', a space for the act of translanguaging as well as a space created through translanguaging" (Wei 2011: 1223).

The resources individuals use to create their translanguaging spaces involve personal experiences, histories, attitudes, values, and ideologies that they have acquired through interaction with others under specific social, cultural, and political conditions. The creation of translanguaging spaces is based on everyday linguistic practices which are governed by social and cultural rules (Leung and Valdés 2019). As such, individuals can relate to the construction and co-construction of identities and emotions as they engage in a variety of translanguaging spaces. In narrative stories, translanguaging is deployed for such purposes as aligning writers and readers with specific discourse communities (Velasco and García 2014), engaging multiple audiences (Pacheco and Smith 2015), and amplifying writers' and readers' intended messages (Stille and Prasad 2015). Building on Wei's (2011) definition of translanguaging, I refer to the process as the use of language to gain knowledge, articulate one's thoughts, or communicate about using language.

2.3 Emotion and identities

As writers and readers deploy translanguaging practices to assert memberships in particular speech communities or social groups, they often construct identities. In fact, a contemporary definition of identity is that it is "the linguistic construction of membership in one or more social groups or categories" (Kroskrity 2000: 111). Although other non-linguistic factors may be crucial, language and communicative practices are often the most commonly used factors by which members distinguish their group and are distinguished by others.

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Antaki et al. (1996) posit that writers, through text production, and readers, through text reception, use language to construct identities as authority for a variety of claims they make and challenge. The identities that are invoked by writers and readers change as the languages change through the process of translanguaging. In other words, the linguistic resources available to writers, through text production, and readers, through text reception, are organized as a system of oppositions in each language or dialect so that in an interaction, any given language or dialect indexes specific kinds of identities they wish to negotiate (Clachar 2016). Based on personal experiences, histories, attitudes, values, and ideologies, identities take on emotional significance depending on such factors as the individual's language proficiency versus differential constraints in the second language, the topic being discussed, and/or sociocultural competence (Dewaele and Pavlenko 2002).

Emotions arise when something happens that is significant to an individual (Gross 2002). Sometimes the goals that influence the rise of emotions are temporary. At other times the goals that give rise to emotions stem from long-term "values associated with health, close relationships, and important work-related projects" (Gross 2002: 285). Academic definitions of emotions tend to be psychological and biological. One commonly used framework for studying the psychological and biological factors related to emotional states is the modal model of emotion regulation (Gross 1998). This modal model identifies a number of stages and the order of the stages involved in the generation and regulation of emotions. The modal model defines the initial stage of emotion generation, for example, as a point when an individual makes a decision between two situations – a phenomenon known as (i) *situation selection*. Situation selection refers to the act of doing something that will place a person in a situation which is calculated to bring about desirable or undesirable emotions. Gross gives the examples of "arranging to go to a movie or avoiding a male coworker" (Gross 2015: 7). The modal model of emotion also includes (ii) *situation modification,* which refers to the act of changing a situation in order to alter its emotional outcome. An example of situation modification is putting away a rejection letter rather than leaving it on a desk in plain sight (Gross 2015). Another stage is (iii) *attentional deployment,* which refers to directing one's attention with the aim of influencing one's desired emotional outcome. An example of attentional deployment is thinking of plans for one's summer vacation while sitting in a boring meeting (Gross 2015). The modal model of emotion also involves (iv) *cognitive change,* which refers to modifying one's assessment of a situation in order to change its emotional outcome. An example is how one may think about one's capacity to manage situational demands such as writing a letter to complain about the unsatisfactory customer service that one has received. The fifth stage is what is known as (v) *response modulation,* which refers to "directly influencing experiential, behavioral or physiological components of the emotional response after the emotion is well developed" (Gross 2015: 9). Examples include using alcohol, cigarettes, and food to change one's mental state (Khantzian 1985).

All of these stages involved in the modal model of emotion generation and regulation find parallels in text production. For example, in highlighting the structural social inequalities underlying language difference, proponents of the phenomenon translanguaging, discussed above, have advocated an orientation that considers nonstandard varieties of English as resources that could serve to resist the marginalizing forces of written standard

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English. Translanguaging is a strategy available to writers from diverse linguistic and ethnic backgrounds to challenge limiting and oppressive discourses and develop discourses of their own. As they do this, they engage in situation selection since the goal is to bring about desired emotions. The movement across multiple languages and/or dialects to construct identities is designed to alter emotional outcomes by both the writer (in text production) and how the message is received by the reader (in text reception). This is tantamount to situation modification, which refers to the act of changing a situation embodied in the message in order to alter its emotional outcome. As stated above, attentional deployment refers to directing one's attention with the aim of influencing one's desired emotional outcome. Translanguaging involves attentional deployment by drawing attention to the ways languages and dialects are navigated, challenged, and utilized on a daily basis in text production. Cognitive change, according to the modal model of emotion, refers to modifying one's assessment of a situation in order to change its emotional outcome. This aspect of the modal model is reflected in the writer's goal of translanguaging. One of the advantages attributed to the movement across multiple languages and/or dialects in translanguaging is that it allows the writer in text production to construct identities that are clearly designed to help the reader assess the text and invoke specific, desired emotions (Wei 2011). The modal model of emotion defines response modulation as a phenomenon "directly influencing experiential, behavioral or physiological components of the emotional response after the emotion is well developed" (Gross 2015: 9). Response modulation is evidenced in translanguaging since the writer, through text production, is able to influence experiential and behavioral elements of the reader's emotional response when both writer and reader share a common knowledge about what values should be assigned to respective languages/dialects in translanguaging.

Pavlenko (2005: 197) avoids an air-tight definition but stresses the relational component of emotions, that is, the emotions that individuals invoke as they interact with one another and how these emotions are likely to change as individuals negotiate identities. She claims that "[s]ocial emotions, including the emotional underpinnings of linguistic decision making, are relational and as such are intrinsically linked to our identities, or subject positions, and identity narratives" (Pavlenko 2005: 197). This chapter is concerned with how emotions are expressed differently across language and dialect use and the way in which writers and readers respond emotionally to text production and text reception. Pavlenko (2005) argues that emotional responses to language are widespread: "Linguistic human beings, we get emotional about what languages we should and should not be using, when and how particular languages should be used, what values should be assigned to them, and what constitutes proper usage. It is not surprising, then, that emotions influence both language policy and language choices" (Pavlenko 2005: 193). The research carried out in the study examines how Puerto Rican return migrants use emotional language as they construct identity. The research also focuses on how the electronic and interactive features of digitally mediated communication, particularly, emails and websites, facilitate the use of emotional language in text production and text reception as Puerto Rican return migrants engage in translanguaging to index Hip Hop identity.

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3 Research questions

1. How do Puerto Rican return migrants use emotional language as they engage in translanguaging?
2. What effects do the features of email communication have on emotion in text production and text reception?

4 Participants

Puerto Ricans who were born and/or raised on the US mainland often speak Spanish in the home and communicate with their grandparents, parents, and siblings in that language. Spanish is viewed as the home and heritage language. Therefore, while living on the US mainland, Puerto Ricans assert ethnic identification by expressing their "Puerto Rican-ness", manifesting an allegiance to the Spanish language, the in-group language, even if it is not spoken fluently (Rodríquez-Cortés 1990). However, when they return to the island to live, they are stigmatized and made to feel separate and subordinate partly because of their low proficiency in Spanish. This lack of proficiency in Spanish is due to the fact that they receive their formal education in US public schools in English and are thus English-dominant. As a result, they are likely to manipulate an ethnic identification which embodies the "North American component" of their ethnic background, manifesting an allegiance to English which now represents the in-group language of return migrants (Clachar 1997). Therefore, on the US mainland, Spanish represents the in-group language, a symbol of unity, while on the island of Puerto Rico, it is the outgroup language, a symbol of divisiveness. Puerto Rican return migrants (Hernández Cruz 1994) also identify with their African American peers with whom they share a common language, African American English, due to their similar structural position in the social hierarchy on the US mainland characterized by segregated neighborhoods and schools (Zentella 1990, 1997). Working-class and low socioeconomic status Puerto Rican return migrants, from a linguistic and cultural perspective, do negotiate distinctive identities as a means of positioning themselves in a multiplicity of social relationships.

This chapter focuses on 12 Puerto Rican return migrant university students who were sophomores. They had just completed two writing courses over a period of an academic year. The courses were designed to teach specific register features of written academic narrative discourse: namely, nominalizations, nominal groups in prepositional phrases, and relative clauses – that is, features which contribute to lexically dense narrative texts. After taking the course, the students worked on a project to create a series of websites to promote a summer camp. According to the students, their summer camp was designed to teach photography, music, art, and video script writing, and it was marketed to attract teenagers. As one would expect, the visual and auditory facets of the websites generated a considerable amount of email exchanges among the students. Thus, the creation of the websites was motivated by an entrepreneurial spirit aimed at appealing to both parents and their teenage children – the latter sharing a solidarity with Hip Hop culture. The websites were developed by a concerted collaboration among the Puerto Rican return migrant

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students who, meticulously working together, paid a great deal of attention to the multimodal facets such as visuals, musical backgrounds, and web spaces for various artistic designs. By their very nature, the websites had to exploit an array of registers, from formal to informal. Since the collaboration among the students took place during the summer holiday when they were in different geographical locations in Puerto Rico and across the US mainland, most of the communication had to take place via email exchanges.

5 Text production and text reception in digitally mediated communication

One of the main characteristics in digitally mediated communication – that is, the internet and other forms of social media – is the tension between registers of speech or informal conversational text and registers of formal writing or written academic text. Based on the purposes of text on websites in digitally mediated communication such as advertising, annual reports, company reports, video reviews, novel reviews, and grant proposals, they are similar to the formal promotional genres that are typical of the registers of written academic texts. In contrast, digitally mediated communication also has purposes that are typical of the informal genres and registers of conversational text (e.g., promotional websites, blogs, YouTube videos, book blurbs, sales promotional letters, fund-raising letters, and travel brochures), as well as interactive characteristics reflected in such digitally mediated communication forms as emails or hypertext links inserted in websites. Another interesting observation is the role of digitally mediated communication in pop culture. Androutsopoulos points to the "multimodal style insignia that cuts across all forms of Hip Hop engagement on the Web" (Androutsopoulos 2009: 55). Digitally mediated communication encourages all kinds of innovative "homepage logos in graffiti style" (Androutsopoulos 2009: 55). The communicative activities and language styles invited by websites, blogs, and emails in digitally mediated communication facilitate a striking range of variability in registers.

Emails, as an electronic and highly interactive media, present texts with a wide range of registers. The use of language in emails is highly dependent on reactions to embedded messages in written texts and, therefore, writers' keen awareness of the intended audience, or readers, as well as register features in the production of every single clause in every sentence. Additionally, writers are forced to consider textual coherence of the email messages simultaneously with the immediate impact on the readers. Similarly, readers, in responding to writers' email messages, must be responsive to the ideational content of the messages in writers' emails. Thus, since email messages must be complemented by clever interface design, they provide an excellent context in which to explore the dynamics of text production and text reception.

6 Collection of data

I examined a corpus of 85 email texts. Obviously, it was difficult to obtain copies of private email texts since informants have a need for and a right to privacy. Although the students

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were familiar with me since I had collaborated with them and the instructors for the writing courses during the entire academic year, I realized that in order to share their personal email messages with me, they would have to check every email exchange for confidential content. Linguists have, in fact, noted the difficulty in accessing private email messages (Hinrichs 2006). The alternative is to follow the method employed by the majority of published linguistics studies of email data: that is, I used non-private emails by becoming part of the social network and including my email address in their newsgroups and chatgroups (Crystal 2001; Montes-Alcalá 2005). I focused on a small representative sample of emails which captured how Puerto Rican return migrant students used emotional vocabulary to negotiate identities in Hip Hop culture during translanguaging among African American English, Standard English and Spanish. I selected emails that offered structural organization and sequencing which allowed the Puerto Rican return migrant participants in the online conversations to view one language choice vis-à-vis another as preferred at specific junctures, thus, invoking specific identities. My selection included emails that projected who the participants "were" from a demographic and social network perspective. Also, the emails provided knowledge which the participants developed through their very own conversations as well as knowledge about the social messages carried by one language choice versus another. I marked each email message with a code to denote each student (S#) followed by a running number for each email message sent (e.g., S#10-14, the 14th message sent by the student who was given the number 10; S#4-26, the 26th message sent by the student who was assigned the number 4, etc.).

7 Analysis of data and discussion of findings

7.1 Research question 1: how do Puerto Rican return migrants use emotional language as they engage in translanguaging?

Noteworthy was Puerto Rican return migrant students' use of emails to explain how they should construct websites to promote their workshops**.** They translanguaged among African American English, Standard English, and Spanish to discuss how they were going to present various aspects of Hip Hop identity on the websites. Analysis of the email texts showed Puerto Rican return migrants strategically used African American English and Standard English to construct the identity of Hip Hop culture. Puerto Rican return migrants tended to identify with their African American peers with whom they share a structural position characterized by low income, segregated neighborhoods, and suboptimal education on the US mainland. This shared experience was reflected and constructed through the use of lexicalized and syntactic features in African American English which serves Puerto Rican return migrants as a language of solidarity. With the advent of digitally mediated communication, such as emails, chatgroups, blogs and other forms of social media, resistance to mainstream culture and linguistic ideology are manifested through translanguaging as minority groups are motivated to invest in forms of writing that construct specific identities. For example, in the email text below, Puerto Rican return migrants manipulated distinctive issues of dominance, resistance and solidarity as they engaged in translangua-

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ging through Standard English, African American English and Spanish. The notion of linguistic, ideological dominance was indexed through the use of Standard English, which is symbolized by the lexico-grammatical features of academic texts. In the email text S#15-12, the writer mixed African American English, Standard English, and Spanish to negotiate Hip Hop identity in urban African America. It should be noted that each switch from Standard English to African American English to Spanish and vice versa in each email text did not have a special indexicality; rather, it was the overall pattern that connoted the communicative intention of the writer. In the email text production that follows, a Puerto Rican return migrant student engaged in translanguaging with multiple linguistic structures in order to inform peers that the website that they were developing must conform to the domains of Hip Hop identity, such as language, knowledge, and politics.

(1) S#15-12: The first web pages should show the dominant themes in Hip Hop, particularly features of depression, stress, and danger in the streets in urban areas but also the struggles for hope and freedom. Hip Hop uses a variety of identities to include a wide audience. *Debes usar las palabras para expresar la energía en las calles, también.* [You should also use the words to express the energy in the streets.] I like the rhymes that express love and sadness. I like the link that shows that Hip Hop *artists they be kickin them lyrics*. [Hip Hop artists always rhyme words.] *Them lyrics slammin bro*. [The lyrics are beautiful, brother.] We need to show that Hip Hop has a lot of reactions. Therefore, this link will show us the number of "like clicks" that the website received.

In this email text production, the narrative shows the student translanguaging from Standard English to Spanish to African American English and provides an insight into the ways emotion vocabulary is incorporated and used when multiple languages are involved. First, the lexical and syntactic forms of African American English are present. The student used the habitual aspect *be* ("they be kickin") and the absence of the copula "them lyrics ø slammin" (Rickford 1999). The student also used the lexical items "kickin" and "slammin", which some scholars have attributed to African American English (Smitherman 1994). As stated above, Puerto Rican return migrants do identify with their African American peers with whom they share a structural position characterized by low income, segregated neighborhoods, and suboptimal schools on the US mainland; thus, most are fluent in African American English (Clachar 2016). In translanguaging, the switches to Standard Enlgish and African American English include the emotional vocabulary "depression", "stress", "danger", "struggles", "hope", and "freedom"; however, the Spanish segment does not include emotional words in the text production. As noted earlier, Puerto Rican return migrants are English-dominant. When they return to the island of Puerto Rico to live, they are stigmatized and made to feel separate and subordinate partly due to their low proficiency in Spanish. As a result, they are likely to manipulate an ethnic identification which embodies the "North American component" of their ethnic background, manifesting an allegiance to Standard English which represents the in-group language of Puerto Rican return migrants (Clachar 1997).

This observation may be due to the fact that emotions are language- and culture-specific and, therefore, closely linked to the first language (Wierzbicka 1999). Emotions appear

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to be influenced by constraints in the second language (Dewaele and Pavlenko 2002), a factor which may have accounted for the fact that the Spanish segment in the text did not include emotional vocabulary in the text production. Related to this observation is the fact that although Spanish is the home language for Puerto Rican return migrants, Standard English is the medium of instruction in US public schools; thus it is the dominant language for Puerto Rican return migrants. Dewaele and Pavlenko (2002) also note that emotion vocabulary is not only related to sociocultural factors but also individual experiences. This assertion seems to comport with Puerto Rican return migrants' identification with their African American peers with whom they share a common language – that is, African American English – due to their similar structural position in the social hierarchy on the US mainland characterized by segregated neighborhoods and schools (Zentella 1990, 1997).

In the email exchange below, the student, through text reception, wanted to preserve the same discourse of Hip Hop identity and, therefore, indexed the emotions related to the notion of resistance/solidarity. The email emphasized how digitally mediated communication facilitated text production and text reception by representing interlocutors engaged in meaningful, co-constructed written narrative stories. The email text reception also showed translanguaging among African American English, Standard English and Spanish as a signal of emotional accommodation to the student's peer. The following email represents a Puerto Rican return migrant student responding to S#15-12:

(2) S#18-21: I see your point. Since it is the first web page the visuals, music and links to the artists must be prominent. *I had threw the visuals in the first section bro, yes the same section that you had gave me yesterday*. [I threw the visuals in the first section, brother, yes, the same section that you gave me yesterday.] *I think Juan had ran the entire music that go wif the visuals to make sure it cool*. [I think Juan listened to the entire music that goes with the visuals to make sure that it is cool.] *We rollin real deep wif them visuals and music!!* [lit. The visuals and the music are beautiful!!] *Mi hermana me está ayudando con la música. Le voy a pedir que me ayude con las palabras para la música también*. [My sister is helping me with the music. I am also asking her to help me with the words that accompany the music.] As we learned in class, the web page should give background language. We need academic language so, I suggest that you use the nouns that you have chosen, such as "mood", "comfort", "sorrow", "invasion", and "disgust", "poverty", "Black street aesthetics", "urban streets". We can then manipulate these nouns to create long sentences by putting adjectives and prepositional phrases before and after them.

The student showed the skilled control of translanguaging among African American English, Spanish, and Standard English and the concomitant roles attributed to these three languages. In addition, the student's use of African American English tense/aspect forms "had threw", "had gave", and "had ran" used to mark the preterit (Rickford 1999) with the African American English lexical forms "bro", "wif", "*We rollin real deep wif them visuals and music!!*" semiotically functioned in ways that paralleled the student's use of Standard English and Spanish since all three languages are linguistic choices and, therefore, identity choices. The translanguaging among African American English, Spanish, and Standard

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English was used to manage Hip Hop identity that was aligned with specific images and social relationships. In responding to S#15-12, the student in the email text reception above was able to present a narrative about the visibility of African Americans in the mainstream American media through associations with Hip Hop artists who value Black street aesthetics. The use of African American English lexical and syntactic forms by Puerto Rican return migrants (exemplified in the email text S#18-2) was based on the perception of the African American culture as male, urban, and street-conscious (Alim 2002). Thus, through text production (email S#15-12), the writer was able to construct a street-conscious identity with the reader in text reception (email S#18-21) indexing the cultural space of values and aesthetics that govern life in urban African America.

Based on the translanguaging behaviors of Puerto Rican return migrants in the above emails, it is obvious that translanguaging is transformative in nature (Wei 2011). It creates a social space for multilingual individuals by bringing together different dimensions of their personal histories, their experiences and environments, their attitudes, and their ideologies into one coordinated meaningful language performance. The use of emotional words "mood", "comfort", "sorrow", "invasion", "disgust", "poverty", "Black street aesthetics", and "urban streets" to frame the background of the web page is noteworthy; also to be noted is the fact that they occur in English, the dominant language. Most Puerto Rican return migrants learned to function academically primarily or only in Standard English (because in US mainland public schools the medium of instruction is Standard English) and have difficulties adjusting to monolingual Spanish classes in Puerto Rico which require knowledge of formal Spanish. Although the majority of Puerto Rican return migrants are English-dominant, not Spanish-dominant, they frequently codeswitch between Spanish and African American English and vice versa in their everyday, informal parlance – a phenomenon which reflects the extent of Puerto Ricans' social contact with African Americans on the US mainland. Standard English academic discourse almost always carries marked metaphorical meanings when used in email exchanges among Puerto Rican return migrants (Clachar 2010). Standard English academic text production and text reception are associated with white prestige ideology in the US (Liu and Tannacito 2013) and, thus, academic texts are often at the center of discussions that question unequal power relations and unravel racial, social, cultural, and political factors attributed to the status quo. The tendency is for the ethnically specific texts in the minority languages to be regarded as "we-codes" and become associated with in-group sociocultural appropriations and for Standard English academic texts to be regarded as the "they-code" associated with dominant white ideology (Motha 2006). In this case, Standard English, which symbolizes the white prestige ideology, is the marked code and is used in in-group email exchanges in a metaphorical sense to construct white/minority social boundaries.

As stated earlier, the students worked on a project to create a series of websites to promote their summer camp. They created a website video in African American English, Spanish, and Standard English. The video was expected to portray the fact that Hip Hop represents the cultural and traditional practices from the African continent and the Caribbean. The following email text production illustrates how different discourses link speech communities with sets of linguistic practices such that the writer can negotiate text boundaries between ethnic categories.

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(3) S#8-14: Before inserting the video, we have to use the features of academic English to introduce and explain to the general public what rap battles are about. It makes the website look professional to the general public. The colorful illustration and the aesthetics of the videos and scripts on the website should show the pride, loyalty, and cultural identification of Hip Hop. You have to explain why Hip Hop has become one of the most important ways for youth and oppressed people to express their humanity and resistance to colonial dominance. *Cómo debemos presenter la primera parte del video*? [How should we present the first part of the video?] *Se necesita un espacio especial en el web para la música de rap y las batallas de rap*. [We need a special space on the web for the rap music and rap battles.] *The lyrics be kickin but I agree wif you that we crazy to leave them like that. Like you dissin the video scripts*. [The lyrics are beautiful but I agree with you that we are crazy to leave them like that. It is as if you are misrepresenting the video scripts.]

The translanguaging among Spanish, African American English, and Standard English highlights the student's core reason for writing the message. Insertions of African American English and Standard English contained the subjective assessment about the vividness of the video scripts on the website. However, Standard English academic discourse was intended to draw the public's attention to the website and was associated with white prestige ideology that earns its users social capital (Liu and Tannacito 2013). Academic English is a marked code, especially when used among Puerto Ricans, to draw attention to formal situations (Clachar 2016). In the email above, the student responded to another student by discussing the importance of introducing the video script on the website in formal English since it served as the rhetorical embellishment for the message.

It should be noted that the first sentence of the email text has many features of academic registers, some of the main ones being nominalization, nominal groups, and prepositional phrases (Halliday 1994). For example, "The colorful illustration and the aesthetics of the videos and scripts on the website should show the pride, loyalty, and cultural identification of Hip Hop". What is noteworthy is that the emotional vocabulary such as "pride", "loyalty", "resistance", and "dominance" in the above email (as well as in others) are nouns which are essential in the creation of academic texts (Halliday 1994). From an educational perspective, this suggests that the electronic and interactive characteristics of emails and websites in digitally mediated communication influence text production, text reception, and emotion, and they tend to spur students' increased engagement in the development of the lexico-grammatical features of academic writing (Clachar 2000). The student also uses translanguaging to carve out specific web spaces for rap music as part of Hip Hop identity. African American English and Standard English are used to discuss how rap music will be presented on the website. Spanish is merely used as a statement about the rhetorical style of how to introduce the public to the content on the website. The report on the aesthetics of Hip Hop identity and its authenticity is carried by Standard English and African American English. In other words, pride is the common emotion associated with Hip Hop identity and it is expressed in Standard English and African American English (Turner and Rose 2005). It is linked to a strong sense of cultural aesthetics and traditional practices from the African continent and the Caribbean (Alim 2009). Walsh (2019) identified

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a similar emotional stance among speakers of Irish. According to Dewaele and Pavlenko, "[w]hen a second language is learned post puberty or even after early childhood, the two languages of an individual may differ in their emotional impact, with the first being the language in which personal involvement is expressed, and the second language being the language of distance and detachment" (Dewaele and Pavlenko 2002: 264). Although Puerto Ricans who were born and/or raised on the US mainland often speak Spanish in the home and communicate with their grandparents, parents, and siblings in the language, it is viewed as the home and heritage language. Therefore, based on Dewaele and Pavlenko (2002), Spanish would be the language of personal involvement and the language associated with emotional expression. However, based on the above email text production (S#8-14), Standard English and African American English are the carriers of "pride" associated with Hip Hop identity.

There may be two reasons for this outcome which were identified by Dewaele and Pavlenko (2002). The first is related to topics, and the second is linked to sociocultural competence. From the perspective of topics, Hip Hop identity is rooted in Afro-Diasporic knowledge, African aesthetics, African American and Latino cultures, social justice education, critical pedagogy, culturally relevant pedagogy, and multiliteracies, topics which are often discussed and quoted in Standard English and African American English (Turner and Rose 2015). The Puerto Rican return migrants' lack of proficiency in Spanish is due to the fact that they receive their formal education in US public schools in English and are, thus, English-dominant. It would seem that both text production and text reception on the topics of Hip Hop identity would invoke emotions in Standard English and African American English. The second factor, sociocultural competence, is "the ability to identify, categorize, perceive, and engage in verbal and nonverbal behaviors similar to other members of a speech community" (Dewaele and Pavlenko 2002: 264). As stated earlier, Puerto Rican return migrants' sociocultural competence is to a large extent influenced by their similar structural position in the social hierarchy on the US mainland characterized by segregated neighborhoods and schools (Zentella 1990, 1997).

7.2 Research question 2: what effects do the features of emails have on emotion in text production and text reception?

The above analysis explicates how email text production and text reception, through narrative stories, are used by writers and readers to engage in co-constructed, emotional language about Hip Hop identity. Since both text production and text reception took place in emails which have interactive characteristics, the messages were likely to be dependent on the readers' keen awareness of the writers' emotional stances in every single sentence in narrative stories. Additionally, through text reception, readers are highly dependent on reactions to emotional messages and the immediate impact on writers – a factor which makes email communication a convenient context to study the interactive connection among text production, text reception, and emotion. This brings me to the second research question: What effects do the features of emails have on emotion in text production and text reception? The electronic and interactive characteristics of email texts seemed to have

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facilitated Puerto Rican return migrant students' abilities to (a) consider textual coherence of their hypertexts simultaneously with their immediate impact on the readers; (b) move constantly from spoken registers of text production and text reception in African American English, Spanish, and Standard English in order to index Hip Hop identity; (c) think about the lexico-semantic relationships among African American English, Standard English, and Spanish in order to interpret emotion-related scripts, and then select the representative emotion vocabulary to construct Hip Hop identity.

Analyses of email text production and text reception in business and academic institutions consistently show that by attenuating socially "visibly and auditory cues" about writers and readers, emails allow participants to communicate in "a less constraining way" than in face-to-face interaction (Baron 1998: 147). Also, emails are like *spoken* text production and text reception since they permit much faster feedback than do the traditional forms of paper-based correspondence and are likely to encourage informality. These characteristics often facilitate the fluent use of emotional vocabulary. Interestingly, because emails are similar to *written* text production and text reception, they are quite often less spontaneous than speech and represent much more planned language use. Thus, translanguaging occurs much more consciously than in speech. The switches among African American English, Standard English, and Spanish in translanguaging in the emails analyzed in this chapter became planned rhetorical processes as the three different languages were used to highlight emotions and index Hip Hop identity.

The Puerto Rican return migrant students were able to craft specific parts of both the text production and text reception to fit particular rhetorical functions that negotiated interactional social meanings and Hip Hop identity. The online nature of email is tantamount to the intense competition for the readers' engagement and input through text reception, a factor which explains why the narrative stories in the writers' text production must inform in a cogent manner (see also Danet and Herring 2007). These electronic and interactive properties gave Puerto Rican return migrant students' emails dynamic autonomy and flexibility which, in turn, induced their personal involvement, self-expression, encouragement to craft their expression of personal voice, and manage impressions of themselves as writers through text production and readers through text reception.

8 Conclusion

This study explored Puerto Rican return migrants' emotional responses as they engaged in translanguaging in text production and text reception. The results highlighted the emotional implications of translanguaging, as a language practice, to index Hip Hop identities. The linguistic fluidity inherent in translanguaging acknowledges Puerto Rican return migrants' ability to manipulate in strategic and creative ways the linguistic resources they had at their disposal in order to participate in productive and meaningful interactions in the form of text production and text reception. The study also pointed to the fact that Hip Hop culture is best understood in the context of conditions that existed in the communities from which it emerged. This means that Hip Hop culture has Afro-Diasporic and Black Power roots manifesting itself as a revolutionary culture taking shape during the tumultuous

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years of the 1970s in the United States (Reeves 2008) and, as such, the culture represents the site where many forms of marginalities are expressed (Turner and Rose 2015). Given this backdrop, Hip Hop culture and identities are linked to African American English and Standard English which Puerto Rican return migrants use as symbols of both resistance and cultural connection. African American English and Standard English channel voice and inspire feelings. The study, therefore, underscores the fact that there are emotional elements linked to the status of minority and dominant languages in Hip Hop culture and identities.

In this chapter, I have attempted to explicate how translanguaging practices in both text production and text reception by Puerto Rican return migrants invoke emotional language as they participate in the negotiation of the identity of Hip Hop. What this study shows is that as American society becomes more culturally and ethnically inclusive, Hip Hop identity becomes an emotional context in which to address such issues as (i) equality in urban education, (ii) racial and ethnic justice, (iii) traumatic life experiences, and (iv) popular culture as resistance. The narrative short stories created translanguaging spaces for Puerto Rican return migrant students to construct, project, claim, and negotiate various facets of Hip Hop identity in their text production and text reception. The chapter has also shown that an exploration of identity provides an excellent vehicle for bringing discussions in the form of narrative short stories as individuals construct and negotiate text production and text reception. Finally, this chapter has illustrated that the production of multimodal texts in digitally mediated communication can be used to involve individuals in thinking critically about their lives and expressing themselves using social, cultural and literacy practices that demand writers' text production and readers' text reception.

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34 Emotion regulation and writing

1 Introduction
2 Future directions
3 References

Abstract: Emotion regulation is indispensable for mental and physical health and well-being. Through emotion regulation, one can bring to bear one or more attentional, cognitive, or behavioral strategies to change the nature of one's emotional response. Expressive writing can provide one richly informative and relatively unobtrusive window into one's emotional experience. In this chapter, we first provide a review of the emotion regulation literature and its connections to health psychology. Next, we review how automated linguistic analysis of expressive writing has been validated as a means of assessing emotional experience and regulation. While we provide a review across regulation strategies, we focus on work examining a particularly flexible and often adaptive emotion regulation strategy, cognitive reappraisal. We draw upon these literatures to propose a framework that outlines relationships among expressive writing, emotion regulation, linguistic distancing, and health – tying the constructs outlined in the first section together. We conclude by discussing several future directions in this field, including the translatability of this discipline to clinical domains and the development of novel linguistic analysis algorithms optimized for the prediction of different emotion regulation patterns and associated mental and physical health outcomes, with the goal of further elucidating psychological, linguistic, and physiological mechanisms connecting emotion regulation, language, and health.

1 Introduction

Emotion regulation is an essential human skill that occurs by modulating one or more processes associated with emotion experience, such as attention, appraisal, and behavioral responses (Gross 1998a, 2015a; Ochsner and Gross 2008). The ability to effectively manage emotions is vital for one's well-being (Gross 1998a, 1998b; Gross and Muñoz 1995). Indeed, language is a powerful means through which one can regulate emotion, and expressive writing can provide a data-rich window into emotion experience and emotion regulation (Nook, Schleider and Somerville 2017; Orvell et al. 2019; Shahane and Denny 2019). This chapter will first provide an overview of the literature surrounding how emotion regulation relates to physical and mental health indicators. Next, we will discuss how one can assess emotion regulation via linguistic analyses of expressive writing. In doing so, we will review

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emotion regulation strategies collectively before focusing on work investigating a particularly flexible cognitive emotion regulation strategy, reappraisal. Given this prior work we then propose a framework that illustrates how expressive writing, emotion regulation, linguistic distancing, and health may be interrelated. Lastly, we will discuss future directions, including the translatability of this discipline to clinical domains and the development of algorithms to predict emotion regulation patterns associated with positive mental and physical health outcomes.

1.1 Emotion regulation and health

Before one can understand how emotions are regulated, it is useful to understand how they are generated. An individual first perceives a stimulus and attends to its features; next, an individual appraises the stimulus's emotional impact, which yields physiological, experiential, and behavioral responses (Gross 1998a; Gross and Thompson 2007). Emotion regulation can therefore affect any of the emotion generation stages. The emotion regulation process model put forth by James Gross distinguishes between *antecedent-focused* regulatory strategies, which one can employ before or during emotion generation and can focus on alterations of perception and appraisal, and response-focused strategies, which can be applied after one experiences an emotional response and focuses on modifying the emotional responses themselves (Gross 1998a). One commonly studied antecedent-focused strategy is *cognitive reappraisal*, which involves modifying the way one thinks about a situation to either increase or decrease negative or positive emotions (Gross 1998b). For example, one could reappraise experiencing an illness by emphasizing to oneself how things are likely to get better soon. Conversely, *expressive suppression* is a response-focused strategy, which involves inhibiting one's ongoing negative or positive emotion-expression behavior (Gross 1998b). For example, one could apply a "poker face" during a card game to avoid betraying any outward signal of having a winning hand.

Much of the emotion regulation literature that has investigated effects of particular strategies has examined cognitive reappraisal, potentially owing to its wide-ranging applicability, efficacy, and trainability (Cohen and Ochsner 2018; Denny 2020; Gross 2013, 2015). When implementing cognitive reappraisal, one changes the meaning of the emotionally evocative stimulus. For instance, if one were to cognitively reappraise a car crash scene to dampen their negative emotions, one could say, "*Medical help is on the way. Also, no one is fatally hurt, and insurance will help, so everything is going to be okay...*"

Indeed, reappraisal is a crucial ingredient in multiple psychotherapies such as cognitive behavioral therapy (Beck 2005), dialectical behavioral therapy (Lynch et al. 2007), and psychodynamic therapy (Have-de Labije and Neborsky 2012; Maroda 2010), which treat mood and anxiety disorders (Dugas et al. 2010). As a result, there has been a push to understand how cognitive reappraisal can be meaningfully applied in the context of clinical disorders (Aldao, Nolen-Hoeksema, and Schweizer 2010; Berking and Wupperman 2012; Cohen and Ochsner 2018; Denny 2020; Denny, Silvers, and Ochsner 2009; Gross and Muñoz 1995; Silvers, Buhle, and Ochsner 2014) and to see how it impacts physiology (i.e., neural activity, peripheral biological systems) (Buhle et al. 2014; Ochsner and Gross 2008; Ochsner, Silvers, and Buhle 2012; Shahane, Lopez, and Denny 2018).

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Importantly, emotion regulation tendencies have been linked to physical and mental health. Overall, individuals who are better at regulating their emotions, and in particular, those who more frequently use cognitive reappraisal strategies, show better physical and mental health indicators, including but not limited to increased heart rate variability and fewer symptoms of depression and anxiety (Aldao, Nolen-Hoeksema, and Schweizer 2010; Denson, Grisham, and Moulds 2011; Tianqiang Hu et al. 2014). Conversely, greater use of expressive suppression is associated with increased risk for cardiovascular disease as measured by C-reactive protein, a biomarker for inflammation (Appleton et al. 2013; Berna, Ott, and Nandrino 2014). Thus, behavioral and self-report indices of emotion regulation frequency and efficacy, particularly when using flexible cognitive strategies, have been associated with adaptive health indicators, while suppression has been linked to worse health indicators.

Furthermore, recent work has elucidated the neural basis linking emotion regulation to biomarkers of positive health outcomes (Lopez, Denny, and Fagundes 2018). For example, Creswell and colleagues (2016) trained individuals on a 3-day mindfulness meditation intervention (a process known to engage emotion regulation) and found altered brain connectivity associated with cognitive reappraisal (i.e., in the dorsolateral prefrontal cortex), and diminished inflammatory responses indexed with interleukin (IL)-6 levels when participants were examined four months post-training (Creswell et al. 2016). Zotov and colleagues (2013) used real-time neurofeedback training and found increases in connectivity between the ventromedial prefrontal cortex/rostral anterior cingulate cortex and amygdala when participants enhanced positive emotions (Zotev et al. 2013). In addition, cognitive reappraisal frequency has been shown to buffer the relationship between autonomic nervous system functioning (indexed with heart rate variability – the variation in time between heart beats) and telomere length (protective caps at the ends of chromosomes that signal health) (Shahane et al. 2020; Shammas 2011; Thayer and Lane 2000). Thus, there exists a growing body of work that demonstrates the relationship between emotion regulation and physiological markers of health as well as the potential neural bases for this relationship.

Further, as noted above, in addition to impacting physical health emotion regulation affects mental health as well. Specifically, emotion regulation ability is associated with anxiety, depression, life satisfaction, and overall general health (Aldao, Nolen-Hoeksema, and Schweizer 2010; Berking et al. 2008; Berking and Wupperman 2012; Gross and Muñoz 1995). Adaptive emotion regulation is related to increased psychological well-being, including both emotional and social functioning. For example, individuals who use reappraisal habitually show positive health indicators, including fewer depressive symptoms, greater self-esteem, and greater life satisfaction (Gross and John 2003). In addition, reappraisal is associated with stronger social relationships (English et al. 2012). Further, among highly stressed individuals (i.e., individuals who experienced high levels of cumulative stress from at least one stressful life event in the last 18 months), cognitive reappraisal has been shown to exhibit protective effects as individuals who habitually use more reappraisal exhibit fewer depressive symptoms relative to individuals who use reappraisal less frequently (Troy et al. 2010). Furthermore, individuals who use reappraisal frequently report lower levels of stress-related symptoms relative to individuals who tend to use other emotion regulation strategies like suppression (Moore, Zoellner, and Mollenholt 2008).

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Past work has typically relied on tasks examining self-reported negative affect ratings in response to negative and neutral stimuli or self-report measures to index emotion regulation (Buhle et al. 2014; Denny and Ochsner 2014; Gross 1998b; Shahane and Denny 2019). Interventions incorporating reappraisal skills training such as cognitive behavioral therapy further have shown promise in clinical settings (Butler et al. 2006). Importantly, however, this literature has not yet fully explored whether analysis of expressive writing reflecting emotion regulation can predict positive health indicators; if substantiated, such evidence may provide the basis for a relatively quick, unobtrusive means of predicting a variety of health-relevant information.

1.2 Emotion regulation and expressive writing

Expressive writing about stressful situations has been shown to be an emotionally liberating process leading to sense-making and allowing individuals to gain broader, objective perspectives as well as distance themselves from adverse situations. In most paradigms expressive writing involves writing openly and honestly for a substantial period of time (e.g., 15–20 minutes) on an upsetting topic (Frattaroli 2006). Expressive writing about distressing experiences promotes self-distancing, indexed by decreased use of first-person singular pronouns (Park, Ayduk, and Kross 2016); therefore, expressive writing serves as a mechanism through which emotion regulation may occur. In addition, affective labelling (i.e., putting feelings into words) has been shown to reduce self-reported negative affect as well as decrease amygdala activation and increase prefrontal cortex activation (Lieberman et al. 2007; Lieberman et al. 2011). Expressive writing demands a certain degree of structure and basic labelling or acknowledgement of emotions (Lieberman et al. 2007), which may underlie its adaptive emotional effects (Pennebaker and Chung 2007).

A recent review suggests how linguistic mechanisms can be a means through which one regulates; specifically, they found that distanced self-talk and generic "you" (e.g., "You win some, you lose some") promotes emotion regulation by allowing individuals to shift from a fully immersed perspective to a distanced view (Orvell et al. 2019). For example, in one of the studies covered in their review, Orvell and colleagues found that the generic-you is used to express norms in both ordinary and emotional frameworks, and that producing the generic-you when thinking about stressful or negative situations allows individuals to normalize their experience by extending it beyond the self (Orvell, Kross, and Gelman 2017). Similarly, third-person language (i.e., using your name rather than "I") led participants who at baseline scored high on Ebola worry (i.e., during the 2014 Ebola outbreak in the United States) to generate more fact-based reasons not to worry about Ebola, which then predicted reductions in their Ebola worry and risk perception, suggesting that this linguistic mechanism can enhance rational thinking in the context of a public health threat (Kross et al. 2017).

Furthermore, Moser and colleagues found converging evidence from functional magnetic resonance imaging and event-related potential data that third-person self-talk (i.e., using your name rather than "I") facilitates emotion regulation without engaging cognitive control (i.e., goal-oriented operations in the prefrontal cortex). When participants were

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asked to reflect on aversive images, third-person self-talk reduced an event-related potential marker of emotional reactivity within the first second of viewing aversive images (Moser et al. 2017). Third-person self-talk was also linked with reduced levels of activation in the medial prefrontal cortex, a brain region associated with self-referential processing (Moser et al. 2017). Though some of the studies and reviews discussed above refer to the self-*talk* literature (i.e., spoken language versus written language), the findings may be generally translatable to writing as well (i.e., writing the generic-you rather than speaking) (Chafe and Tannen 1987).

In addition, other work suggests that expressive writing impacts attention and habituation to stressful stimuli and to negative emotions. Specifically, expressive writing may allow one to direct attention toward or away from aversive thoughts associated with the stressor, attenuating physiological or affective stress responses and thereby facilitating habituation (Lepore et al. 2002). Therefore, expressive writing may influence the restructuring of cognitions related to stress responses and the stressors themselves (Lepore et al. 2002).

Further, there is evidence that positive health outcomes are related to expressive writing about negative situations (Lu and Stanton 2010; Pennebaker 1997). For example, expressive writing – often measured by how personal the writing is, how much emotion is revealed, the length of the writing, and the percentage of self-references in the writing – is associated with better long-term physical health as indexed by fewer illness-related visits to the doctor (Pennebaker and Beall 1986), improved lung and liver function, and fewer days required in the hospital (Baikie and Wilhelm 2005). A rich feature of expressive writing is the translation of emotional experiences into words. Even in the absence of an instruction to regulate, extensive verbal processing is associated with reduced negative affect and enhanced immune function, including T-helper cell growth, antibody response to Epstein-Barr virus, and antibody response to hepatitis B vaccinations (Pennebaker and Chung 2007). Interestingly, content appears to be an important factor. Systolic blood pressure and heart rate drops below baseline following the disclosure of traumatic topics but not superficial ones (Pennebaker, Hughes, and O'Heeron 1987). This suggests that when people share personal topics, and especially when doing so when using a distanced mindset and vocabulary, physiological responses are consistent with those seen among individuals relaxing (Pennebaker and Chung 2007).

Furthermore, the promise of expressive writing as a means to regulate emotion has been substantiated by a recent meta-analysis; specifically, 146 studies on experimental disclosure found that writing about thoughts and feelings associated with personal and meaningful topics is beneficial for psychological and physical health (Frattaroli 2006). That said, however, other examinations of the effects of expressive writing interventions on health outcomes have yielded divergent conclusions. A meta-analysis of 64 intervention-control group comparison studies on the effect of expressive writing on depressive symptoms found that brief, self-directed expressive writing was not efficacious in reducing depressive symptoms among healthy adults with varying levels of stress (Reinhold, Bürkner, and Holling 2018). One study, however, showed that among depression-vulnerable college students, participants scoring above the median on the suppression subscale of the Emotion Regulation Questionnaire (Gross and John 2003) showed significantly lower depression symptoms at the 6-month assessment when they wrote in the expressive writing condition

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versus the control condition (Gortner, Rude, and Pennebaker 2006). Overall, an important question for the field concerns understanding the right recipe for an effective expressive writing paradigm (Smyth and Pennebaker 2008). Evidence from our work suggests that focused, task-driven expressive writing specifically reflective of cognitive reappraisal, and in particular of certain reappraisal tactics, as discussed below, may yield positive mental and physical health outcomes.

1.3 Emotion regulation and linguistic distancing

Up until now, we have largely discussed reappraisal in broad terms. However, reappraisal can be operationalized via one or more tactics (e.g., distancing and reinterpretation) (Denny and Ochsner 2014; McRae, Ciesielski, and Gross 2012). Psychological distancing involves appraising the emotionally evocative stimulus as an objective, impartial observer (i.e., by "taking a step back" and employing self-distancing; Kross and Ayduk 2017), and/or by interpreting a negative situation as spatially or temporally far away (Trope and Liberman 2010). Furthermore, there is evidence that there is often a "bleed over" effect, such that increasing psychological distance in one domain (e.g., self/social) often leads to increases in distance in other domains as well (e.g., spatial, temporal; Kross and Ayduk 2017; Liberman and Trope 2008; Trope and Liberman 2010), and individual studies have often operationalized distancing using instructions that manipulate appraisal in multiple distancing domains at once (e.g., Denny and Ochsner 2014). For example, one could appraise an aversive, graphic image as an objective and impartial observer using third-person pronouns and in the past-tense – perceiving it as if it occurred long ago. In addition, psychological distancing has been associated with decreases in psychophysiological and neural indices of affective arousal, such as blood pressure and skin conductance (Ayduk and Kross 2008; Gross 1998a; Paret et al. 2011) and amygdala activity (Ochsner and Gross 2008; Ochsner, Silvers, and Buhle 2012; Tamir and Mitchell 2011).

Above, we reviewed literature suggesting how expressive writing can be a means of emotion regulation and that health benefits are frequently associated with this process. Similarly, shifting language to be more distant helps regulate negative emotions, as distance decreases negative affect and language can encode distance (Nook, Schleider, and Somerville 2017). Thus, the term "linguistic distancing" is used to describe language-based psychological distancing – language that is reflective of utilizing the distancing tactic.

Recent research has begun to elucidate the linguistic mechanisms by which psychological distancing impacts emotion regulation (e.g., by speaking in the third person; Kross and Ayduk 2017; Kross et al. 2014). Nook and colleagues (2017) examined whether negative affect ratings were related to natural language patterns of distancing after participants wrote about negative images using psychologically "close" or "distant" language in social, spatial, and temporal domains. Nook and colleagues (2017) used Pennebaker's Linguistic Inquiry and Word Count (LIWC; Pennebaker et al. 2015) to analyze the text responses and computed a linguistic distancing metric that combined several measures that track verbal immediacy (i.e., first-person singular pronouns, present tense verbs, articles, discrepancy words, and words with more than six letters). The authors demonstrated that in all three

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distancing domains, using distanced language reduced negative affect, and that the instructed use of distanced language in one domain (e.g., physical, social, or temporal) also had spill over effects in modulating language use in the other distancing domains (Nook, Schleider, and Somerville 2017).

Additional work has linked shifts in pronoun usage to reduced negative affect in distressing situations. For example, participants who use non-first-person pronouns and one's own name instead of first-person pronouns while introspecting about a previous conflict or a time of anxiety and worry in their past have been shown to report lower negative affect (Kross et al. 2014). Further, Kross and colleagues (2014) also demonstrated that non-first-person language use was shown to lead people to appraise future stressors as less threatening (Kross et al. 2014). However, this prior work has focused on usage of first-person pronouns in particular rather than a comprehensive linguistic signature more directly reflective of psychological distancing (Cohn, Mehl, and Pennebaker 2004; Mehl, Robbins, and Holleran 2013; Nook et al. 2017).

We recently examined linguistic evidence of psychological distancing via an expressive writing task, implemented via either one of two sub-tactics for distancing. Participants were asked to appraise a negative stimulus either (i) as an objective, impartial observer or (ii) via perceived spatial and temporal distance. We investigated whether linguistic evidence of psychological distancing – a form of reappraisal – via these two sub-tactics was associated with adaptive health-related indicators (Shahane and Denny 2019). We found that across both psychological distancing groups (i.e., collapsed across the objective tactic group and the spatial and/or temporal tactic group), linguistic distancing was associated with lower perceived stress and symptoms of depression, better emotional well-being and energy and vitality, and greater reappraisal frequency and fewer difficulties in emotion regulation (Shahane and Denny 2019). While previous research illuminated connections among reappraisal frequency across multiple reappraisal tactics and some health indicators, including depressive symptoms, life-satisfaction, and well-being (Gross and John 2003), our results indicated for the first time that linguistic distancing in particular is associated with several adaptive health indicators. As a result, this study built on an emerging body of research on the adaptiveness of distancing as a tool in one's emotion regulation repertoire (Ayduk and Kross 2008; Kross and Ayduk 2008, 2017).

1.4 Proposed framework

Building on the work reviewed in the preceding sections, Figure 34.1 illustrates a proposed framework that outlines expressive writing's relationship to the degree one engages in emotion regulation overall, the degree to which one implements linguistic distancing processes, and how these processes affect health. Expressive writing, the fundamental predictor, is associated with physical or mental health. Emotion regulation and linguistic distancing serve as potential non-independent mediators. Future work is needed to establish causality, investigate these relationships in clinical and translational domains, and leverage computational algorithms to further strengthen and expand the ability to reliably predict mental and physical health indicators from sparse yet meaningful linguistic data. Ad-

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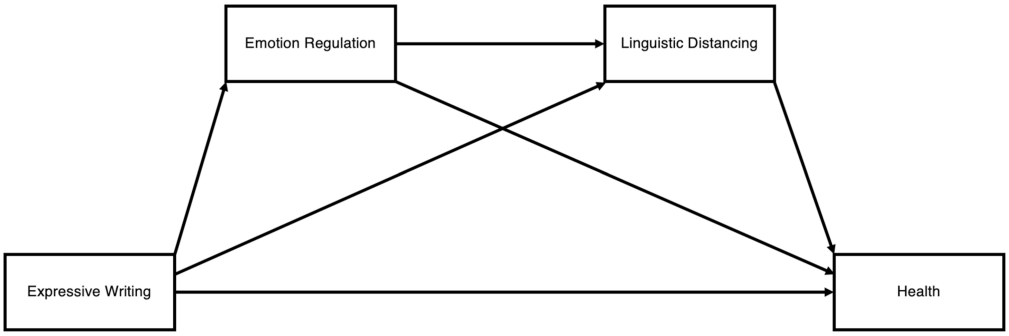

Fig. 34.1: Proposed framework. Engaging in expressive writing predicts changes in mental and physical health, with emotion regulation and linguistic distancing serving as non-independent mediators.

ditionally, while time is not explicitly highlighted in this framework, future longitudinal studies are also warranted to examine whether increases and improvements in expressive writing, emotion regulation, and linguistic distancing over time yield positive health outcomes. These future directions are explored in Section 2.

2 Future directions

2.1 Translational and clinical domains

There are several different future directions for this field, and we will now dive into each of these avenues in detail. The first direction, which several researchers have begun to investigate already, is examining how emotion regulation via expressive writing has implications in translational and clinical domains (Kross and Ayduk 2017). Specifically, the studies described above substantiate the idea that language may be used as a target for efficacious psychotherapies. For example, in a study examining the effects of writing about intensely positive experiences on weight and disordered eating during a naturalistic stressor, researchers found that emotionally expressive writing may reduce the risk of dietary restraint in women (Kupeli et al. 2018). Further, while psychological distancing has been incorporated into the training amalgam of several existing psychotherapies (e.g., mindfulness-based stress reduction) (Grossman et al. 2004), psychological distancing has significant potential to be investigated with regard to its unique therapeutic value. For instance, depression and posttraumatic stress disorder (PTSD) clinical trials demonstrate how practicing the ability to distance oneself is a flexible strategy that may be implemented in clinical practice (Ayduk and Kross 2010; Kross and Ayduk 2017). Further, Kross and colleagues suggest that individuals with major depression and social anxiety may benefit from linguistic distancing, as self-distancing strategies facilitate coping with distressing situations (Kross et al. 2014).

As a result, language, and in particular language incorporating psychological distancing, may represent a particularly effective target for mental health interventions designed to foster adaptive emotion regulation. However, as mentioned above (e.g., the Reinhold,

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Bürkner, and Holling [2018] meta-analysis), the literature on the effects of expressive writing and health benefits has provided mixed results. For example, one nationwide randomized controlled trial found that an expressive writing intervention is unlikely to improve health-related outcomes in cancer patients and cancer survivors overall, but rather expressive writing may have a beneficial impact (e.g., larger decreases in telephone calls to their general practitioner) specifically for individuals who write about their personal cancer experience as well as for individuals who are low in alexithymia (i.e., the inability to identify and describe emotions one is feeling; Sifneos 1996) (Jensen-Johansen et al. 2018). Thus, future research is needed to investigate the impacts of expressive writing in terms of target population (e.g., differential efficacy as a function of individual differences and psychopathology), the emotional situations in which individuals are involved (e.g., positive or negative situations about which individuals are writing), and crucially via which linguistic instructions are given (e.g., which forms of emotion regulation are promoted). Further, it will be crucial to investigate whether any such impacts are strictly for mental health and quality of life or if physical benefits manifest as well.

Importantly, in order to investigate the direct impact of expressive writing interventions, be it in healthy or clinical populations, causality must be established. Most of the research in this area is correlational; thus, it could be that emotion regulation via expressive writing leads to better health outcomes, or it could be that better health leads to more effective use of emotion regulation when language is manipulated to incorporate lexical shifts. Causality may be explicitly tested in future work via longitudinal, experimental designs examining the long-term health consequences of linguistic emotion regulation using different tactics (e.g., distancing versus other tactics of reappraisal) and between distancing sub-tactics (e.g., objective versus spatial and/or temporal distancing). Future work may further unpack the correlates of linguistic distancing using additional sub-tactics, such as separately examining spatial distancing (e.g., perceiving something as physically far away) and temporal distancing (e.g., perceiving something as having happened far in the past). As with any emotion regulation strategy, and in accordance with the framework proposed in Figure 34.1, it will be crucial to investigate *for whom* and under which circumstances distancing may be most and least appropriate (Doré, Silvers, and Ochsner 2016). In addition, it will be important to examine how to flexibly select *when* to implement distancing and/or other emotion regulation strategies (Gross 2015b), which represents an important skill of its own and a key area of future study.

2.2 Novel algorithm development to predict emotion regulation patterns

The second future direction is the development of algorithms to predict emotion regulation. Through the development of machine learning algorithms, one can quantitatively assess the degree to which an individual's writing is objective and spatially/temporally distant and then relate these scores to those individual's health outcomes in the future. Currently, the field is relying on specific elements of speech such as non-first-person pronouns or the composite linguistic distancing metric (Kross et al. 2014; Nook et al. 2017; Shahane and

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Denny 2019). However, focusing on non-first-person pronouns may be too narrow, and more elements of language reflecting distancing must be taken into account. Similarly, the composite linguistic distancing metric used in our study and in Nook and colleagues' (2017) study relies on a subset of linguistic elements that also do not fully capture elements of distancing. We believe that while these approaches are an excellent start, they are only scratching the surface of what the field may ascertain computationally via machine learning techniques. While the composite linguistic distancing metric is an excellent way to index language-based psychological distancing, it lumps the sub-tactics (objectivity and spatial/temporal distance) together. Developing algorithms that specifically predict objective and spatial/temporal language may provide an even more granular measure of which distancing tactic is being used, and this may aid in elucidating which tactic or tactics are most strongly driving adaptive health benefits.

In our study described above (Shahane and Denny 2019), interestingly, there were no significant differences in correlation strength between linguistic distancing (indexed with the composite linguistic distancing metric) and health indicators between the group that used objectivity versus the group that used spatial/temporal distance. That said, there were more health indicators significantly associated with objective distancing relative to spatial/temporal distancing. Importantly, the difference between "significant" and "not significant" is not itself statistically significant (Gelman and Stern 2006). While speculative given the lack of between-group differences, it is possible that distancing using objective means (i.e., appraising negative situations as an objective, rational, impartial observer) may be more promising as a therapeutic "main ingredient" relative to distancing using modulations of perceived spatial and temporal distance, per se. Future work may continue to examine this possibility, as well as relevant individual difference factors that may predispose some individuals to be more receptive to one reappraisal sub-tactic relative to another.

2.3 Conclusion

Overall, we have provided a review of the literature and a framework for the investigation of interrelationships among expressive writing, emotion regulation, and health. Continued investigation of the ways in which expressive writing and emotion regulation are interrelated and predictive of meaningful mental and physical health indicators may further substantiate the basic mechanisms and translational benefits of emotion regulation via expressive writing in a variety of populations. Further, additional experimental work in this area may clarify causal relationships among these constructs. In addition, machine learning techniques may allow for more sensitive linguistic assays of emotion regulation during expressive writing, potentially increasing its translational relevance in predicting health outcomes.

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IX Communication and emotion in conversation

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Carrie Childs

35 Emotion in conversation

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2 Introducing Conversation Analysis and Discursive Psychology
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Abstract: This chapter is concerned with discourse-centred approaches for examining emotion in conversation. Specifically, the chapter focuses on Conversation Analysis and Discursive Psychology. These approaches share a focus on the study of language as a topic in its own right – as a means of constructing, rather than representing, reality. With regard to emotion, the focus is on examining emotional displays and the ways in which these are invoked, managed and treated in conversation. The primary issue is the interactional work that is done and how notions of emotion are topicalised and managed in specific settings. The chapter has two major subsections. In the first I introduce Conversation Analysis and Discursive Psychology as research tools. I provide a description of each and outline their core methodological features. In the second I provide specific examples that illustrate the application of Conversation Analysis and Discursive Psychology to the study of emotion. The aim is to elucidate these approaches as ways of exploring emotion in naturally occurring interaction, highlighting the ways in which approaches based on analysis of authentic interaction can contribute to an understanding of emotion in conversation.

1 Overview

Suppose that a researcher is interested in emotions in psychotherapy – for example, how therapists display empathy in their interactions with clients. Therapists might show empathy to their clients by using techniques such as not interrupting the client, not dismissing the clients' beliefs, not being judgemental and not talking too much (Elliot et al. 2011). A researcher might study these therapist skills by surveying clients on their perceptions of therapist empathy, and by rating levels of satisfaction. Alternatively, a researcher might conduct qualitative interviews with therapists to explore how they understand empathy, how they demonstrate empathy during their interactions with clients and what they perceive to be the benefits of doing so. While these methodologies are useful for addressing particular questions, they do not allow for an examination of this particular emotion concept in conversation – how therapists bring off displays of empathy and what therapists' displays of empathy may be designed to do. Such an approach is important because emo-

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tions are intrinsically social – rather than individual phenomena that occur in a social vacuum, emotions are bound up with broader social and interactional practices.

This chapter presents two discourse-based approaches for examining emotion in naturally occurring conversation. The chapter is divided into two major sections. The first introduces Conversation Analysis (CA) and Discursive Psychology (DP) as research tools. This section begins with a brief overview of discourse-based approaches and then outlines the basic principles of CA and DP in turn, showing how these methodologies can be used in practice. The second section outlines the specific contributions of each approach to the study of emotion in authentic interaction. An aim is to draw out the similarities and differences between the approaches – to consider the distinctive characteristics of each, as well as to chart some of the relationships between them. A second aim is to highlight the benefits of ethnomethodological informed approaches, which provide a vehicle for examining how emotion plays out in authentic interaction.

2 Introducing Conversation Analysis and Discursive Psychology

Within the social sciences over the past few decades, new ways of working have been developed which have allowed researchers to examine human conduct in ways that are distinct from the traditional conceptions offered by sociology and psychology. CA offers a sophisticated analytic approach to social action, while DP has developed a fresh treatment of mind and emotion and examines how psychological concepts are managed and oriented to in interaction. These ethnomethodologically informed approaches both offer ways of investigating social life in situ in ordinary and institutional settings. A key tenet is the importance of the displayed orientations of participants in interaction – how speakers themselves attend to or make relevant a particular action or interpretation. These approaches have taken advantage of new technology tools for generating data, which allows research to engage immediately with human practices, studying the world as it happens. What research has traditionally seen as personal, individualised concepts, such as emotion, are now understood as bound up with broader social and interactional practices.

2.1 Mapping the terrain: discourse-based approaches

There are a range of approaches to the study of discourse, many of which can be described as Discourse Analysis (DA). DA emerged in the 1970s alongside the "linguistic turn" in the humanities and the social sciences. A wide range of Discourse Analytic methods have been laid out and can range from a macro level of analysis, which often involves the study of many texts in order to make broad claims about a particular period or society, through to micro-levels of analysis, which might involve the explication of meaning-making processes in specific situations. There are distinctive features of DA that differentiate it from other language-based approaches. First, the interest in language use extends beyond a narrow

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focus on the use of single words. As such, approaches such as Content Analysis, which typically counts the number of times particular words appear in a text, are outside of the scope of DA. Second, DA typically takes into account aspects of the wider context when examining written text or an interaction. For example, a key tenet of Critical Discourse Analysis (Fairclough 1992) is to consider the social and political context of a discursive event.

DP is a type of DA that considers how psychological concepts and concerns are deployed to perform social actions in talk, and which offers a fresh way of understanding mind, cognition and emotion. It was developed out of a particular form of DA outlined by Potter and Wetherell (1987), which pioneered discourse-based research in psychology and presented a new way of approaching the topics of social psychology. Methodologically, DP "has been profoundly influenced by conversation analysis" (Potter 2006: 132) and draws on the conversation analytic literature to provide methodological rigour and empirical power. DP's focus on social actions performed in authentic interaction by people themselves distinguishes the approach from more macro-level, critical discourse approaches that might aim to identify the wider structural and political implications of discursive practices. Another feature of DP that sets it apart from other types of DA is its focus on naturalistic interactions, rather than favouring open-ended interviews as a method of data collection. This approach has had a lasting impact on how emotion is conceptualised, spawning an expanding and evolving body of empirical studies of emotion in social interaction (Childs and Hepburn 2015).

CA is a methodological approach to discourse that involves the systematic analysis of talk in authentic interactions. CA has its roots in the sociology of everyday life and has had significant influence across the humanities and the social sciences. There is some disagreement concerning whether CA is a type of DA, or a distinct methodology in itself. A first reason for this is that CA focuses on social actions, rather than the content of talk – the management of interaction in itself is at the core of research. A second reason is CA's traditionally narrow definition of context as something that is co-constructed and which shapes and is shaped by social interaction, rather than something that exists outside of the talk itself. The broader social and cultural context and how these may shape language use is not given scope. Instead, CA aims to identify particular interactional phenomena from close analysis of a collection of instances. Nevertheless, CA is one of the key methodological approaches to the study of authentic interaction, and so it is given prominence within this chapter.

2.2 Conversation Analysis

This section provides a brief overview of CA and an illustration of its basic principles, using live examples. CA is a vast discipline that has become one of the most empirically cumulative fields in the study of interaction. As such, it is beyond the scope of this chapter to discuss the history of CA in detail, but comprehensive accounts can be found in Clift (2016) and Hutchby and Wooffitt (2008), amongst others.

CA first emerged in the 1960s in the writings and lectures of the sociologist Harvey Sacks and was later developed alongside Emanuel Schegloff and Gail Jefferson in the late

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1960s and 1970s. For conversation analysts, language in itself is not the primary object of study – the focus is the organisation of social interaction. As language is a primary means by which humans interact, CA typically, but not necessarily, involves the analysis of talk and may often include other forms of human conduct such as gaze, gesture and orientations to physical objects. Research attends to the sequential order of interaction – in simple terms, conversation analysts aim to understand how participants make sense of and respond to one another in their turns at talk, with a central focus on how social actions are performed – the ways in which people do things with talk, such as blaming, requesting, complaining and so on. The focus is how turns at talk are designed to perform social actions. For example, when someone says "can you pass me the salt", this is best understood as "doing a request" rather than talk about the topic of salt, or the recipient's ability to pass the salt to the speaker.

A distinctive feature of conversation analytic research is the use of the Jefferson system of transcription notation, which uses a range of symbols to capture how things are said, including paralinguistic features of talk such as intonation, emphases and pauses in talk (see Hepburn and Bolden [2017] for a detailed account of the Jefferson system). For example, in extract (1) below, the upward arrows surrounding the "ay" in "okay" indicate raised pitch, while the colon indicates that the preceding sound is stretched. The (h) in "you" indicates a laughter particle produced within this word and the period within parentheses at line 2 indicates a minute gap of silence of less than a tenth of a second. Capturing this level of detail permits a focus on the actions performed in talk, as well as talk's verbal content.

Since the advent of CA, a large body of empirical work has discovered and described the key features of talk-in-interaction – the building blocks of social life and of social order (Heritage and Stivers 2012). These include how people organise who should talk next and when they should do so, how actions are coordinated into series of turns and how co-interactants deal with problems in speaking, hearing and understanding. Conversation analysts use and develop findings about these key structural features of talk-in-interaction to study actions performed in ordinary settings, for example how speakers tell amusing stories in breakfast or dinner table conversations (Selting 2017), and actions performed in institutional settings, such as how police officers bring investigative interviews to a close (Childs and Walsh 2018).

2.2.1 An illustration of CA's basic principles

There are a number of basic conversational structures that are central to CA, that allow for an appreciation of what CA has to say about how people manage the business of having a conversation. The key practices that allow orderly conversations to take place are sketched out by Schegloff (2007). These are turn-taking, sequence-organisation, repair, word selection, and the overall structural organisation of talk. These are demonstrated below in relation to two brief data extracts. Both extracts come from police interviews with children reporting their being victim of an alleged sexual offense. In the first extract the interviewer (Int) is inviting the child (Chi) to add any information that may not have already been discussed during the course of the interview.

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(1)

```
01  Int ok↑a:y↑ erm:, can y(h)ou think of anything I::'ve not spoke to you
02      about that you (.) p'rhaps expected me to ask you
03      [ (1.6)        ]
04  Chi [((moves legs))]
05  Chi [ e::rm,          ]
06      [((brief gaze up))]
07      [ (3.4)
08  Chi [((directs gaze down))
09      ↑e:rm↑ .pt d'no [rea:lly, but e:rm, (0.4) I kno:w- I hope this is=
10                      [((gazes at interviewer))
11      =not like (.) [↓being nosey or anythi:ng,↓ (0.4) #buah-# do you=
12                    [((raises hand, puts on side of head))
13      =know about anything about whats gonna happen to granddad or
14      anything
```

(Childs and Walsh 2018: 373, extract 6)

CA identifies the ways in which speakers organise who should talk next and when they should do so (Schegloff 2000) or turn-taking. A basic understanding can be gleaned from the term itself – people in a conversation take turns at speaking, and this is something that people are exceedingly good at. As the actions that make up conversations are implemented through turns at talk, turn-taking is a fundamental for understanding how talk in interaction is organised. The extract above is composed of two turns at talk by two different speakers. They speak one at a time and there is an extended silence (line 3) between speakers. Turns are made up of Turn Construction Units (TCU) and in the extract above the turns uttered by each speaker are of different lengths – the first is made up of two distinct components ("ok↑a:y↑" and "erm:, can y(h)ou think of anything I::'ve not spoke to you about that you (.) p'rhaps expected me to ask you"), while the second is made up of three components ("e::rm," "↑e:rm↑ .pt d'no rea:lly," and "but e:rm, (0.4) I kno:w- I hope this is not like (.) ↓being nosey or anythi:ng,↓ (0.4)" and "#buah-# do you know about anything about whats gonna happen to granddad or anything").

Sequence-organisation is concerned with how an interaction is easily understood as a coherent episode. A central principle of CA is that talk is sequentially organised – a series of turns has a structure and turns are produced to coherently follow preceding turns. Actions are organised into sequences, the most basic of which is the adjacency pair – pairs of utterances produced by two different speakers, the first of which initiates an action, the second of which is responsive to it. Commonly, as in extract (1), a question is followed by an answer, an invitation is followed by acceptance or declination, a greeting is followed by a return greeting, and so on. The action that is accomplished in the police interviewer's turn in the extract above is central in Childs and Walsh's (2018) analysis of what they term the additional business question, whereby police officers solicit additional information and ask witnesses if they would like to add to what has been said. They show how the example in the extract above is treated as a genuine invitation to proffer additional information. They compare this with similar question formats that typically appear at the end of interviews and are a routine, formulaic step in bringing the interview to a close, not to be taken

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as a genuine invitation. The action sequence is key in understanding how analysis in CA works – the focus on the sequential organisation of interaction sets CA apart from many other approaches to language and interaction. For conversation analysts, it is essential to examine the positioning of an utterance in the ongoing conversation and this is crucial to the understanding of its meaning and of its significance as an action.

Repair describes the ways in which speakers manage problems in speaking, hearing and understanding as the interaction unfolds (Drew 1997) and is fundamental to how speakers organise their talk in interaction. It is quite common for speakers to engage in *self-repair* and to halt what they are saying, treating what they are saying as in some way problematic and fixing that problem. In the extract above the child cuts off his talk at "I know", in order to alter his turn in progress, replacing this with "I hope". As Childs and Walsh (2018) note, "I hope this is not like (.) ↓being nosey or anythi:ng,↓" orients to the question as one that the child is not entitled to ask. They make the point that, nevertheless, the format of the interviewer's question in the preceding turn, which clearly invites the interviewee to elaborate or to provide additional information, provides agency and space for him to do so. Repair might also be initiated by the recipient of an utterance, as in the following example where the police interviewer initiates repair with "he was on what sorry=".

(2)

1	Chi	er:m::, (1.8) <I'd had heard about some peopu::l ta:lking
2		(.) about hi:m> (1.0) an:::d, (.) he was on Instagra:m
3		(0.6) so:: I decided to follow hi:m (1.8) a:nd er:m
4	Int	he was on what sorry=
5	Chi	I:nstagram.
6		(0.2)
7	Int	↑I::n↑stagram. I've not heard of that

(Childs and Walsh 2017: 196, extract 5)

Another fundamental aspect of CA's method is turn-design, which refers to how speakers design their turns to perform an action, and how turn format informs recipients' understanding of the turn. When, in line 4 in the extract above the interviewer utters "he was on what sorry", she selects from among a range of possible ways of initiating repair – a partial repeat (such as "Instagram?"), a partial repeat plus a declarative "↑I::n↑stagram. I've not heard of that" or an unspecified repair (such as "hmmmm?"). Each of these alternative formats can present different hearings or understandings of the nature of the trouble. The design of the interviewer's turn suggests that the problem is one of hearing, and the child's subsequent verbatim repeat treats this as such. The interviewer's second repair initiator at line 7 treats this verbatim repeat as inadequate and casts the problem as one of understanding. We can see then that the design of the interviewer's turns as she initiates repair informs the child's understanding of the turn.

Finally, there is an overall structural organisation of interaction, the way that speakers organise and structure a conversation that informs the understanding of the talk (Schegloff and Sacks 1973). Childs and Walsh (2018) describe the structural organisation of the closing sequence of police interviews – specifically, how, when the additional business question

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(such as "is there anything else ↓you want to tell me↓") is delivered at interview closure, its purpose is to move participants to the closing of these interviews. At a literal level, this question provides the opportunity for interviewees to add further, investigation-relevant information, or to ask any questions of the interviewer. Childs and Walsh show that the closing of police interviews is structured in such a way that these kinds of questions are routinely used to move towards closing the encounter.

2.3 Discursive Psychology

DP is a truly interdisciplinary approach with several theoretical and intellectual roots. It is influenced by the philosophy of Wittgenstein, as well as constructionist thinking in the sociology of scientific knowledge, the discipline of ethnomethodology and the empirical power of CA. It is an approach to social science topics that evades the traditional disciplinary boundaries "to provide a rich participant-based understanding of action" (Hepburn and Wiggins 2007: 3). Discursive psychologists are broadly split into two schools, the first of which is often referred to as Critical Discursive Psychology. For example, the work of Parker (2015) questions the assumptions of mainstream psychology and presents a criticism of current psychology as an "American" discipline. Parker's work is written "in and against psychology" and discusses two approaches – the Foucauldian approach and the concept of interpretative repertoires. Critical Discursive Psychology is positioned more as a macro approach that addresses issues such as power, ideology and oppression. The second school of DP, which has been referred to as the Loughborough School of Social Psychology (Stokoe, Hepburn, and Antaki 2012), is a micro approach that does not assume social inequality but examines whether parties to an interaction make inequality relevant in their social interaction. The latter form of DP is the focus of this chapter.

DP was developed by Edwards and Potter (1992) as they set out to rework and respecify some of psychology's central concepts such as memory, attitudes and attributions. The approach engages with psychological themes and topics and is concerned with how psychological matters are played out as individuals co-ordinate their activities during the course of everyday interaction. The focus is on psychology from participants' perspectives, as something that is managed and oriented to in interaction, for example how people make the emotions and intentions of others relevant. Analysis starts with social practices and, when examining concepts such as emotion, the focus is on how emotion categories can be threaded through interaction, and how ascriptions and avowals of emotion can be used to perform actions in talk. Studies in DP have focussed on a range of aspects. For example, Flinkfeldt (2017) examines how the term "want" is used in multi-professional meetings with sickness benefit claimants in Sweden. She outlines the interactional work that claimants engage in to establish their "want" to get well and to return to employment. Iverson (2019) analyses interviewers' claims to understand in child social welfare interviews and shows how interviewers may claim to understand what interviewees mean, even in instances when this meaning may not have been vocalised. As such, interviewers orient to a difference between accessing information about and understanding interviewees' experiences – understanding is treated as a matter that goes beyond an awareness of the particular details of interviewees' experiences.

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2.3.1 An illustration of DP's basic principles

There are three overlapping major strands of interest in DP:

1. Respecification and critique – psychological concepts are respecified, or rediscovered, as discursive practices. Traditional psychological topics such as emotion are approached empirically, as topics of discourse. They are understood as interactional matters, rather than as individual concerns. A major goal is to unpack, critique and respecify the topics of mainstream psychology and the methods typically used for investigating these.

2. The psychological thesaurus – a focus on instances where psychological terminology (e.g. angry, jealous, upset) are put to use by people themselves to perform social actions in talk (such as to argue a case, provide an account).

3. Managing psychological implications – an examination of how psychological themes are oriented to, handled and managed, without necessarily being labelled as such. The focus is how descriptions of events and actions are organised in ways that invoke and manage themes such as issues of blame, caring or empathy.

Let us consider an example to illustrate what DP is and the kinds of questions it might address. The extract is taken from a family mealtime and Katherine (Kat) is refusing to eat a yoghurt, which sibling Anna (Ann) then attempts to claim for herself.

(3)

```
01              (7.2)
02  Kat     I don't ea:t (.) all mi::ne (.) ↑yoghurt ( )↑
03              (2.0)
04  Mum     you're have to have< so[me chee]rios as well=
05  Ann                            [hh     ]
06  Mum     =th[en if you're not goinna eat that one]
07  Ann        [bee: gesu::h                        ]
08          neh!ver guu:h ((singing))
09          ((reaches over and points at Kath's yoghurt))
10              (2.0)
11  Ann     [gu::h yoghu::rt              ]
12  Ann     [((taps Kath's yoghurt))      ]
13              (0.8)
14  Kat     don't want ↑ea::t↑ that o:ne
15              (0.3)
16  Mum     if you don't eat that one you're going to need
17          to eat some cheerios cause that's not enough one
18          little yoghurt¿ before you go to schoo:l.
19          [    (1.6)                              ]
```

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```
20 Lin    [((separates full yoghurt from Kath's eaten one
21        and places towards middle of table)) ]
22 Ann    o:[:h!]
23 Mum    [ w]'you have some cheerios?
24 Kat    ((nods head slightly and quickly))
25 Ann    [I w[a:nt      o::]:ne              ]
26 Ann    [((reaches for Katherine's yoghurt))]
27 Mum         [or a banana?]
28        [((moves yoghurt away from Anna))]
29        [    (0.2)                   ]
30 Kat    °mum[ee::°   ]
31 Mum        [you need] to finish that fi:rst darling
32        ((to Anna))
33 Kat    I want cheerios please
34 Mum    °°alri:ght eat your gra[pes]°°
35 Ann    [I wa]nt two (.) woghurts
36             (2.2)
37 Lin    [ea:t those first,        ]
38 Lin    [((passes grapes to Kath))]
```

(Childs 2014: 109–110, extract 1)

There are different ways that an analyst may approach this piece of data to understand what is happening. A researcher might ask why Katherine does not want to eat her yoghurt and whether this reflects, for example, a fear response. We might also ask whether the refusal of new foods is a pattern for Katherine and if so, what might have caused this. We might consider whether Katherine's fussy eating can be explained by evolutionary reasons, as a means of preventing poisoning from unfamiliar food, or whether Katherine has modelled her parents' fussy eating habits. We might also consider the interaction from Anna's perspective – why is it that she appears more willing than Katherine to eat? We could then carry out further research to discover the factors that influence children's willingness to eat. Each of these interpretations would involve making assumptions about what the participants are thinking or feeling and about wider variables relating to food refusal. Reference to wider variables to explain participants' actions is beyond the aims and scope of DP, which instead focusses on the social actions that are being performed within this piece of interaction at this particular time.

In her analysis of interaction in family mealtimes, Childs (2014) draws on two of the main strands of DP and shows how children's uses of "I want", an example of the psychological thesaurus, are used to perform actions in talk. In the extract above, at line 25, Anna uses an "I want" construction to attempt to claim a yoghurt that her sibling Katherine has refused to eat. Childs shows how a recurrent environment in which young children deliver requests using an "I want" format is when the item being requested is something that has been made available to a sibling. It might be inferred that if a child requests something that has been given to a sibling, the request is being made simply because the sibling possesses or has been offered the item. "I want" request formats manage this by foregrounding the speaker and their wants, irrespective of the sibling. Further, if an item has

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been offered to a sibling, then it is expectable that the same thing be made available to the child making the request. The use of an "I want" format, rather than a modal verb such as "can I have a yoghurt?" displays entitlement to make the request and an expectation that the request will be granted.

Childs' (2014) analysis of children's uses of "I want" to perform actions within particular sequential environments provides a lever for the respecification and critique of Theory of Mind. When approaching an extract such as the one above, research in Theory of Mind adopts a referential view of language, which assumes that mental state terms are used as names referring to private, inner entities. As such, researchers might employ a coding scheme designed to identify "genuine references to psychological states" (Bartsch and Wellman 1995: 31), that is, uses of "I want" that are a genuine reflection of an internal desire state. Those that are coded as otherwise are disregarded for the purposes of analysis. For example, Katherine's "don't want ↑ea::t ↑ that o:ne" (line 14) might be coded as a simple refusal of her food. Utterances that are coded as conversational are understood as being fruitless for revealing how children talk about the mind. Childs (2014) challenges the idea that any uses of "I want" necessarily correspond with an internal experience of desire and argues that "any conversational deployment of a notion of 'wanting' will always be a means of performing some kind of action within an interactional sequence" (Childs 2014: 120). As such, Childs shows how the referential view of language that underpins work in Theory of Mind is inadequate for understanding how and when mental state terms are used in conversation.

In DP then, analysis involves examining phenomena of interest, in this example children's uses of "I want", as resources in and for interaction that have practical uses in a particular conversational context. Similarly to CA, there is no attempt or need to look beyond the words to find out what may be going on inside people's heads, or to determine which of the, potentially limitless, wider variables relating to children's willingness to eat may affect Katherine's or Anna's food choices.

2.4 CA and DP: similarities and differences

CA and DP are distinct approaches with differing disciplinary backgrounds, however they share many similarities and may be differentiated from other discursive approaches by their particular, shared approach to certain analytic issues. First, both start with emotion as a public object – rather than beginning with experience or physiology and considering, for example, what having empathy feels like, the focus is on how empathy is displayed in interaction, and how it is responded to. The focus of the analysis is the interaction, rather than the individual. Second, both largely draw on naturally occurring spoken interaction. Methods such as focus groups, interviews and other materials that have been produced for the purposes of research are considered less appropriate as they fail to capture talk as it occurs during the course of everyday, ordinary life. The use of naturalistic data allows researchers to examine life as it happens – the activities that people perform in talk in real-life situations. A third point of similarity is that both reject the use of "top down" investigator-determined research questions and instead are both data-driven approaches to research. Inspired by ethnomethodology's thoroughly "bottom-up" approach, and Sacks' proposal that analysts should "pose those problems that the data bears" (Sacks 1992: 471),

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researchers ideally begin with naturally occurring data and allow the data itself to determine the shape of the analysis. Finally, both approaches prioritise participants' orientations – how speakers themselves make sense of the ongoing interaction. When an analytic claim is made, the analyst must "show the claim is grounded in the conduct of the parties, not in the beliefs of the writer" (Schegloff 2007: 45).

Although CA and DP greatly overlap and share the same methodological approach, there are some notable differences. One point of departure is that CA examines how issues such as knowing and understanding are treated in interaction, primarily through the sequential organisation of turn-taking. On the other hand, DP is concerned with the epistemological nature of that knowledge or understanding – the constructive nature of descriptions and how meaning is created in interaction. This difference in emphasis arises in large part from their differing disciplinary roots. DP developed within, and as an alternative to, mainstream contemporary psychology. As such, it is strongly anti-cognitivist as it has reworked and respecified "psychology" in discursive terms from the outset. On the other hand, CA's disciplinary roots are within sociology and from the outset it has eschewed cognitivism (Potter 2006). A second difference is in how the status of cognition may enter into the analysis. DP is firmly incompatible with contemporary cognitive psychology, as there is a fundamental argument regarding the status of cognition as the driving force behind human behaviour. On the other hand, conversation analysts have considered the interface between interaction and cognition (Albert and Ruiter 2018). There are related debates about the combination of CA with quantification, experimentation and laboratory observation (see Kendrick 2017). Meanwhile, quantification and the social constructionist philosophy that underpins DP represent radically different ontological and epistemological orientations.

3 Discursive and conversation analytic studies of emotion

Having explicated the basic principles of CA and DP, this second part of the chapter outlines these approaches as ways of exploring emotion in naturally occurring interaction. Emotions are typically displayed and recognised when people interact with each other and as such they play a prominent role in social life. In spite of this, they have traditionally been studied outside of real interactions, often in experimental, laboratory settings, or by using participants' reports of emotions (Sorjonen and Peräkylä 2012). However, an increasing number of studies, spawning from diverse lines of research such as interactional sociolinguistics, interactional linguistics and linguistic anthropology, are focussing on how emotional stances are expressed and responded to and on how emotion concepts are managed and put to use in authentic spoken interactions.

There are many reasons why within linguistic research, historically emotion was "set aside as an essentially unexplorable aspect of linguistic behaviour" (Besnier 1990: 420) and why discourse-based research may have been considered an inappropriate means for studying emotion. A major reason has been the assumption that emotions are internal

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properties of the individual. For scholars in any discipline – for example, researchers within psychology who focus specifically on emotion – there are methodological issues that create obstacles. How private, inner states can be reliably investigated is unclear. The study of the display and interpretation of emotion as it occurs naturally within conversation is plagued with further methodological challenges. Discourse-based approaches examine language as a topic in its own right, rather than the underlying phenomena such as emotions, attitudes or beliefs that are traditionally understood to underlie, and to be revealed through, talk. Displays of emotion may not accurately reflect, or even be similar to, speakers' inner feelings (Sandlund 2004) and as such there are epistemological questions concerning whether discursive research has the capacity to examine "the *feeling* of emotions rather than just the *talk* of emotions" (McAvoy 2015: 24, emphasis in original).

Throughout the 1970s and 1980s, anthropological and historical studies challenged the notion that there are a universal set of basic emotions that are private to the person experiencing them. Work within anthropology highlighted the fundamental importance of cultural meaning in emotional experience and challenged "the cultural assumptions found in Western thinking about the emotions" (Lutz 1988: 3), arguing that emotion concepts are bound up with social structure rather than individual feelings. It became apparent that the experience of emotion is not universal and that the understanding of emotions as private entities is particular to Western culture. At the same time, historical studies of emotion etymology started to outline the changes that have occurred in the emotional repertoires of cultures throughout history (see e.g. collections in Harré [1986]). As these interconnected lines of research began to challenge the "basic emotions" approach, social constructionist research on emotion gained momentum. This work was an important precursor to DP, which extended social constructionist studies of emotion and offered an empirically based way of studying emotions in the context in which they occur (Childs and Hepburn 2015).

Meanwhile, research within linguistic anthropology, which recognises the centrality of language to what makes us human, has had a close affinity with CA. Throughout the 1970s and 1980s these researchers began to pay more attention to the role of affect in language, posing questions such as "how do we talk about emotions and feelings? How do we talk about the linguistic encoding of these phenomena?" (Ochs 1986: 253). Ochs and Schieffelin's (1989) ground-breaking work on "the pragmatics of affect" outlined linguistic features that denote affect in everyday talk. They noted that almost any aspect of the linguistic system that is variable is a candidate for expressing affect, laying the groundwork for future research into the display and management of emotion in social interaction.

3.1 Conversation Analysis and emotion

Ochs and Schieffelin set out a framework for understanding the role of affect in language that was "not concerned with issues of speakers' actual feeling states or the extent to which their affective expression is sincere" (Ochs and Schieffelin 1989: 7). In spite of this, CA and emotion were traditionally considered an unusual combination largely because, as a non-cognitivist approach to discourse, CA makes no claims about participants' "inner states". Historically, CA researchers were reluctant to use the terms "affect" and "emotion" and

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preferred to use terms such as "affiliation" or "stance" instead, adopting what Sandlund (2004) refers to as a quotation mark approach. However, the role of emotion in social interaction is inescapable – dealing with emotion is an ever-present concern for participants in social situations and as such is an important aspect in the analysis of conversation. Consequently, in recent years a large cumulative body of research has documented the expression of emotion and the emotional underpinning of activities carried out in interaction by examining the details of conversation.

A key aspect of this work has been to show that, in contrast to the idea that emotions are involuntary eruptions that burst out of us, emotional displays are relevant to the ongoing conversation. For example, Wilkinson and Kitzinger (2006) examine surprise tokens (such as "wow", "gosh" and "oh my God"), and show how these are interactional achievements that play a role in the conversational context, rather than the spontaneous externalisation of a presumed inner state. They focus on how such displays are made relevant in conversation and how they are prepared for in the preceding talk, as well as their interactional functions. Consider the following example, taken from interaction between a professor and student in a classroom:

(4)

```
46  Prf     So you've got two hundred
47          of these do you.
48  Std     Uh yes.
48              (.)
49          Prf GOod Lo:rd!
```

(Wilkinson and Kitzinger 2006: 164, extract 15)

Earlier in the class, as part of an in-class presentation of a project, the student reported having a collection of "about two hundred" instances of a phenomenon. At this point the professor produced a surprise token, in overlap with the student's talk. The extract above is taken from the end of the student's presentation where the professor recycles this surprise source turn (lines 47–48) and asks the student to confirm that they have two hundred instances of the phenomenon. The recycling of the surprise source turn prepares for the upcoming surprise token. Following the student's confirmation, the professor performs a post-confirmation surprise reaction with "Good Lord". This reaction token has a particular interactional function and reissues praise, presumably with the goal of inspiring other students in the class to make similarly big collections.

Studies on emotion tend to focus on different aspects that Ruusuvuori (2013) refers to as *loci of affect*. These range from larger sequences of actions such as dealing with the distress of people reporting their being victim of alleged sexual offenses (Antaki et al. 2015) to single characteristics of a word or utterance such as prosodic marking cues to distinguish between "normal" and "surprised" or "astonished" questions (Selting 1996). The following sections discuss examples of research on two different aspects – emotion and multimodality and emotion in institutional settings.

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3.1.1 Emotion and multimodality

Many studies in CA have involved analyses of video-recorded data and include information about participants' embodied interaction. While classical CA was developed from audio recordings of either telephone calls or face-to-face interactions, the advent of video recording has allowed access to a wealth of information that is useful for analysis such as gestures, facial expressions and orientations to physical objects. During the late 2000s the term "multimodality" began to gain currency to describe this work. Goodwin and Goodwin pioneered an approach to examining emotions as multimodal, embodied practices, showing how "affect is lodged within embodied sequences of action" (Goodwin and Goodwin 2000: 37). In their analysis of video recordings of young girls playing hopscotch, they describe a range of embodied practices that the participants deploy to display an emotional "stance" towards their co-participants, such as coordinated pitch elevation, posture and gesture.

Research has also documented the importance of facial expression. Peräkylä and Ruusuvuori argue that amongst the channels of expression in multimodal interaction, the face "predominantly conveys what we feel about something" (Peräkylä and Ruusuvuori 2012: 64). They examine the ways in which facial expression conveys a "stance" in the context of storytelling – whereby story tellers display what can be interpreted as their attitude towards the story that is being told – whether it is funny or sad, for example. They focus on occasions where a story has come to a close and a response by the story recipient is due but is delayed. Facial expression is a key means of conveying emotion in this environment and story tellers will typically turn their heads towards story recipients and produce animated facial expressions that display a stance and provide the recipient with cues for a relevant way to respond to the telling. These facial pursuits perform a particular action in this environment and facilitate a mutual display of emotion between the storyteller and recipient. Emotion, then, is something that is an interactional achievement, something that is displayed and managed by participants. Building on this work, Selting (2017) examines the display and management of affectivity in the telling of amusing stories. They note that when telling a story, the emotional valence might be suggested by the storyteller, using resources such as the facial pursuits produced by storytellers in Peräkylä and Ruusuvuori's study. However, ultimately affective interpretation is something that is negotiated and accomplished collaboratively by the teller and the story recipients. Storytellers will construct their climaxes with displays of amusement such as smiles and laughter and the ways in which the climaxes of stories are managed differ according to how story recipients respond.

3.1.2 Emotion in institutional settings

A large body of work has examined social interactions in institutional settings such as therapy, helplines and legal settings. Much of this work has dealt with the display and management of emotion, and how emotion can be a vehicle for performing institutional tasks. In an early example, Whalen and Zimmerman (1998) discuss the interactional management of "hysteria" in calls to the 911 emergency number. They focus on the display of

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hysteria by callers, when, where and how it occurs within actual interactions in calls, and supplement their analyses of actual calls with ethnographic data (interviews, field observations). They identify a number of features, observable in the extract below, that call takers typically describe as "hysterical" demeanour:

(5)

```
1   CT    Nine one one what is yur emerg- ((cut off by static))
2                 (0.2)
3   C     ((howling/shrieking voice)) GO::D!, MY WIFE (JUST SHOT
4         HERSELF)! (0.3) THIRTY EIGHT FIFTY NINE ( ) AVENUE
5         HURRY U:::::P!
6                 (0.2)
7   CT    What happened?
8                 (0.2)
9   C     ((howling/shrieking voice)) (AR:::)=SHE JUS SHOT
10        HERSE::LF!=
11  CT    =SHE FELL?
12                (0.2)
13  C     SHE SHOT HER SELF WITH A SHOTGUN!
```

(Whalen and Zimmerman 1998: 146, extract 1)

Here, the caller is talking in an extremely loud and distorted voice, and is virtually howling or shrieking. The call taker has difficulty in making sense of what the caller is saying (for example, asking "she fell?" at line 11). Later in the call, the call taker makes repeated efforts to calm the caller, who yells out in anger and frustration. Whalen and Zimmerman (1998) also note how, when discussing calls and callers with other emergency staff, the notion of "hysteria" is used to assess and account for callers' behaviour. For example, when call takers describe callers as "hysterical", it is used as an account for a kind of situational ineptitude and a caller's inability to cooperate with the business of the call, such as providing information to the call taker or receiving instructions.

More recently, Weiste (2016) examines video recordings of occupational therapy sessions at a psychiatric outpatient clinic and outlines practices used by therapists to manage talk related to clients' emotional states. Specifically, they outline two types of formulation sequences – in the first, clients take a positive stance towards their experiences and describe their competence, agency or personal strength, and this stance tends to be highlighted and endorsed by therapists. In the second, clients describe their troubles and take a negative emotional stance towards their experiences, for example a client with an eating disorder describing periods where she forgets to eat and rest and consequently loses her strength and feels bad again. In these examples therapists first topicalise clients' difficult emotional states (using formulations such as "you've had that kind of feeling of tiredness and exhaustion that overrides you occasionally") before redirecting the talk to less emotional aspects of the clients' experience.

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3.2 Discursive Psychology and emotion

Childs and Hepburn (2015) provide a detailed overview of the development of the discursive psychology of emotion, which "deals with how people talk about emotions, whether avowing them or ascribing them to other people, and how they use emotion categories when talking about other things" (Edwards 1997: 170). In his seminal paper, Edwards (1999) maps out an approach to examining how emotion concepts are actually used, and how the vocabulary of emotion is an integral feature of how people report and account for events that they are relating. He notes that the flexibility of emotion concepts "is rich and various, full of contrasts and alternatives, and marvellously useful in working up descriptions of human actions, interpersonal relations, and in handling accountability" (Edwards 1999: 273). Edwards lays out ten rhetorical contrasts concerning emotion that are used recurrently in everyday language to ascribe meaning and to manage accountability. For example, there is a contrast between rational versus irrational, whereby emotions may be described as rational, appropriate and understandable, or as irrational, inappropriate and unreasonable. There is also a contrast between emotions that are driven either by events or by dispositions. Event-driven emotions are responses that anyone may have faced as a result of the same event, or they may be dispositional – enduring, characteristic features of the way that an individual acts. These contrasts are highlighted in the following extract which is taken from relationship counselling with a couple, Connie and Jimmy.

(6)

1	Con	At that poi:nt, (0.6) Jimmy ha- (.) my-
2		Jimmy is extremely jealous. Ex- extremely jealous
3		per:son. Has a:lways been, from the da:y we met.
4		Y'know? An' at that point in time, there was an
5		episo:de, with (.) a bloke, (.) in a pub, y'know?
6		And me: having a few drinks and messin'. (0.8)
7		That was it. (0.4) Right? And this (0.4)
8		got all out of hand to Jimmy according to Jimmy
9		I was a:lways doin' it and .hhh y'know a:lways
10		aggravating him. He was a jealous person
11		I: aggravated the situation. .h And he
12		walked out that ti:me. To me it was (.)
13		totally ridiculous the way he (0.8) goes o:n
14		(0.4) through this problem that he ha:s.

(Edwards 1999: 272–274, extract 1)

Here, Connie describes Jimmy's "jealousy" as part of his disposition, an enduring pattern, the way that he "has always been, from the day we met". According to Connie, Jimmy's jealousy is a deep-rooted part of his personality that predates their current marital difficulties. As such, Connie's account of their marital difficulties locates their causes as something from inside Jimmy. Connie also describes Jimmy's jealousy as irrational and pathological, "totally ridiculous the way he (0.8) goes o:n (0.4) through this problem that he ha:s.", which works as a way of undermining Jimmy's rational accountability and the account that

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he may give of the incident "with (.) a bloke, (.) in a pub" or for their marital difficulties. The rhetorical contrasts that Edwards lays out highlight emotion discourse's action orientation, and how invoking a particular emotion term or concept is always a means of performing some kind of action within a conversational sequence.

As noted earlier in this chapter, there are three key overlapping strands of interest in work in DP; respecification and critique, the psychological thesaurus and managing psychological implications. Discursive Psychological studies of emotion have focussed on these different aspects and I now outline and provide examples of each.

3.2.1 Respecification and critique

Respecification and critique was a key aspect in early work in DP, as it developed within psychology as an analytically based alternative to mainstream cognitive approaches. Emotion is respecificed in discursive terms, with an accompanying critique of mainstream psychology's individualist approach to emotion, whereby emotions are conceptualised as variables that may affect behaviour. Mainstream psychological studies use various tools such as self-report instruments and observations of vocal characteristics or facial behaviour, with the aim of examining cause and effect and identifying the rules that govern behaviour. These measurement strategies share the assumption that emotions are entities that are underlying and separate from interaction and that language is a methodological tool that allows access to the mind and to these private entities. As Childs and Hepburn note, "from the outset DP developed as a challenge to this referential view of language" (Childs and Hepburn 2015: 115). In an early example, Locke (2003) examines how athletes invoke emotion concepts in accounts of their performance. She shows how experiencing particular types of emotion, such as "nervousness", is treated as normal and expectable. When discussing sporting successes, athletes in this study constructed emotions such as "anxiety" and "nervousness" as "positive" and as facilitative to performance. In contrast, when discussing failures, athletes constructed the build up to their performance as containing no experience of these emotions. As such, claiming not to have experienced the right emotions before competing forms one way of accounting for failure, as in the following example:

(7)

1	Int	the circumstances behind the (.) over confidence
2		and the complacency (0.4) because you'd got a PB in
3		the last race
4	Ros	yeah I- I wasn't nervous before the race
5	Int	okay=
6	Ros	=and I know- that (.) and if I'm not nervous (.)
7		I don't (0.2) swim well (.) and I suppose going into
8		the race I knew that I wouldn't do a very good
9		ti:me (0.4) because I wasn't nervous and I tried
10		making myself nervous >but it wouldn't happen
11		somehow<

(Locke 2003: 83, extract 3)

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In this extract, the interviewer cites "over confidence" and "complacency" as a result of achieving a personal best time (PB) in a previous race as a possible cause for subsequent poor performance. At line 4 Ross accepts this formulation and states "I wasn't nervous before the race", and then constructs a general account of how he should feel before a race "if I'm not nervous (.) I don't (0.2) swim well". He subsequently claims that he "knew" that he would perform poorly and not swim a good time because of his lack of nerves. The interviewer does not request any further justification, which according to Locke, is evidence of the interactional currency of emotion terms in the sporting arena. Rather than emotion discourse reflecting a private state which can be measured on its own, Locke shows how emotion discourse "is part of a larger accounting structure" (Locke 2003: 87). This provides a springboard for critiquing the study of emotion within mainstream sports psychology, which relies heavily on quantitative measures and as such is led by analysts, rather than participants. Locke shows how a discursive approach allows a focus on what participants construct as relevant or important to them, and what the use of emotion terms is accomplishing interactionally for the participants.

3.2.2 Emotional thesaurus

A second strand of work has focussed on the psychological thesaurus and how "psychological" terminology, such as emotion terms, are described, invoked and put to use by people themselves in situ as part of the social actions performed in and through everyday talk. For example, Locke and Edwards (2003) examined uses of emotion concepts in Bill Clinton's discussions of his relationship with Monica Lewinsky under Grand Jury cross examination. They show how Clinton managed blame and accountability by depicting himself as rational and sensible in contrast to Lewinsky, who was portrayed as irrational and emotional – Clinton describes Lewinsky as getting "upset from time to time". Locke and Edwards (2003) note that "it is implied that Lewinsky was perhaps prone to getting upset, such that any pursuit of the reasons for her getting upset, on any particular occasion, might look to reasons within her, and not only to local causes such as what (in this case) Clinton might have done or said to provoke her" (Locke and Edwards 2003: 250).

More recently, drawing on the robust interactional research on assessments, which refers to how entities that are being talked about are evaluated, Wiggins (2014) examines how children and adults use terms such as "love", "like" and "hate" to construct and manage food preferences in everyday family mealtimes. Traditionally in food research, these terms are understood as references to inner cognitive, sensory or physiological states and as a reflection of a person's preference towards foods. In contrast, Wiggins shows how uses of these terms are bound up with social and conversational norms. Discursive psychological research has shown how assessing food is an interactional matter. For example, Wiggins and Potter (2003) highlight the distinction between subjective category assessments, those which foreground the person doing the eating and their reaction to the food (such as "I love this fish") and objective assessments (such as "this fish is lovely"). Wiggins and Potter also highlight the distinction between item and category assessments, with category assessments (such as "I don't like chicken") implying that this is a claim about food preference, rather than an on-the-spot assessment about this particular food item (such as

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implied by "I don't like *this* chicken"). In her analysis, Wiggins examines uses of the terms "love/like/don't like/hate" by both children and adults, as examples of subjective category assessments. Uses of "love" and "hate" were relatively infrequent within her materials, revealing that the norm is to use the terms "like" or "don't like". Overwhelmingly, when "hate" appeared in her data, this was used by children to make claims about their own "hated" foods, in environments where a child was asking to leave some of the food left on their plate, or where food was being declined, as in the following example:

(8)

```
1   Mum    cranberry ↓je:lly Darr↑en::
2   Dar    ooh ↓no::
3   Mum    not like ↑it
4   Dar    I hate cranberries
5                (1.4)
6   Mum    >its just like< mint ↓jelly only
7          cranbe(hh)rries heh heh (0.4) [.hheh heh
8   Dar                                  [<I hate
9          ↑cran:berries:>
10  Mum    heh hh
```

(Wiggins 2014: 11, extract 7)

In this extract, the food is offered to (line 1) and rejected by (line 2) Darren, and the reason for his refusal is treated by Mum as an indication of "not liking" the food. Darren emphatically confirms that he dislikes the food on line 4 and lines 8–9. While the offer is of a specific food, cranberry jelly, the assessment is of a wider category of food – cranberries. Wiggins shows how the uses of what she refers to as the food preference lexicon – love, like, don't like, hate – are bound up by social and conversational norms, such as those surrounding assessments and the rights to make claims about one's own and others' bodily states.

3.2.3 Managing psychological implications

A third strand of work examines how affective and emotional themes are handled and managed without necessarily being overtly labelled and how descriptions of events and actions are organised in ways that invoke topics such as understanding, caring and empathy. Emotion concepts become things that people do rather than something that people have. Patterson and Potter (2009) show how "caring" is a practical, conversationally unfolding accomplishment with a range of systematic elements. They examine closing sections of telephone calls between a young adult with a learning disability staying in a residential placement and members of her family, and show how speakers attend to the potentially interactionally troubling matter of closing the call in ways which construct a "caring" stance to one another. Specifically, they focus on the use of accounts when ending calls and how speakers typically invoke some kind of external constraint that requires call termination, as in the following example:

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(9)

```
1   Gra    didn't you hear it just now, wh[en:]'uh-
2   Sue                                    [no:]=
3   Gra    =no neh mi:nd. (.) .h ↑OKa:y, THen, Ducky,
4          i'm ↓going now
5          (1.2) ((phone cable making noise))
6          i'm getting thi:rsty and #croaky#
7   Sue    ↑o↓Kay:.
```

(Patterson and Potter 2009: 13, extract 4)

At line 4, Gran announces her intention to "go", and thus to end the call. This is followed by an account that emphasises her physical limitations, she is getting thirsty and croaky and as such is required to end the call. This implies that she is reluctant to do so. Patterson and Potter show how these accounts do delicate relationship sustaining work and build each speaker's care for the other.

More recently, Versteeg and te Molder (2016) examine what they term "my side" empathy formulations in video recordings of specialised coaching sessions for people with Attention Deficit Hyperactivity Disorder. They note how, in the institutional context of a therapeutic conversation, a psychotherapist or coach can claim to know more about a client than they themselves do and that delicate interactional work is needed in order to negotiate what can be known by whom and how. Versteeg and te Molder show how rather than claiming direct access to clients' feelings, coaches claim independent access using "my side" empathy formulations, or claims about their own bodily sensations in order to infer knowledge about their client's inner state and to address the meaning and significance of what a client has just said.

4 Concluding discussion

This chapter has outlined the contributions of CA and DP to the study of emotion. These are methodologically innovative approaches that provide greater theoretical sophistication in research on emotion. Discursive approaches highlight how emotions emerge in and for social interactions – a co-constructed emotional display rather than the expression or communication of a private, inner state. This work stands in stark contrast to essentialist approaches that treat emotion as an individual matter and that understand language as a tool that allows researchers access to private, internal states.

These approaches are constantly evolving along with technological advances. The widespread use of video recording paved the way for the multimodal turn and has expanded the original remit of CA and DP from talk-in-interaction to exploring the multimodality of social interaction. Further technological advances have allowed researchers to explore novel methods of data collection and have begun to open up other areas of examining emotion in conversation. Conducting interactional research within the laboratory is a contentious issue; however, this allows for the use of cutting-edge technologies that currently

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cannot be used outside of a research lab (Kendrick 2017) such as automatic eye blink detection software, eye tracking glasses and brain imaging techniques. As Kendrick notes, as technologies continue to advance, becoming more portable and less intrusive, they will undoubtedly find their way out of the lab.

Collaborations between conversation analysts and experimentalists have begun to use techniques such as brain-imaging methods to uncover the cognitive processes that underpin conversational practices, deepening understanding of the skills involved in carrying off conversation (Bögels, Casillas, and Levinson 2016). With the interactional turn in psycholinguistics and cognitive linguistics, whereby research has come to recognise the centrality of social interaction, there will undoubtedly be an expansion of experimental work in this area. As emotions involve a physiological component, there is much potential to explore the interconnections between the physiology and the interactional display of emotion. Research has begun to explore the physiological correlates of affiliation and affective stance in storytelling (Peräkylä et al. 2015; Voutilainen et al. 2014) and of empathy and challenge in therapist-client interaction (Voutilainen et al. 2018). Voutilainen et al.'s study (2018), which found that therapists' responses to their clients have immediate effects in both therapists' and clients' emotion system, will be useful in developing ways forward. Future research might explore conversational practices that are effective in either increasing or decreasing emotional arousal in other institutional settings, which will allow for greater sophistication in understanding how practitioners engage emotionally with clients. In addition, future neuroimaging studies may benefit from the insights offered by discursive research. For example, interactional research may offer increased precision in understanding the role of language in emotion construction and regulation in studies of the neural representation of emotional experiences.

Another area for development is work on embodied sensorial interaction that incorporates senses such as touching, tasting and smelling. Multi-sensory aspects of interaction remain understudied, as Mondada (2016) notes, sensoriality tends to escape traditional video analyses and as such represents a new challenge for discourse-based research. No doubt the development of new technology will assist researchers in considering the involvement of entire bodies in interaction and to overcome a visuo-centric view of embodiment.

Discourse-based approaches offer a window into how emotion is displayed, managed and oriented to in conversation. CA and DP both offer robust methods for the systematic analysis of emotion in authentic interaction. These approaches offer ways of achieving greater theoretical sophistication in research on emotion. Both are relatively young approaches but have had lasting impact on how emotion is understood.

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Roland Kehrein

36 Phonetic sounds of affect, prosody, rhythm and emotions

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3 What is prosody?
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5 What do we know about the relationship of prosodic or vocal features and emotions?
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Abstract: Any researcher attempting to capture and comprehend emotions scientifically is confronted with the fact that emotions are highly abstract concepts; as a result the semantic analysis of emotions but also the description of their experience and their expression is highly problematic. Historically, in the area of emotion research two prominent approaches to solve these problems can be distinguished. One of them is to define a more or less fixed set of basic emotions which are regarded as the basis for any form of emotional meaning, perception, or expression. The other approach divides emotional meaning into a number of semantic components proven to be relevant for this lexical field. Experiencing or expressing emotions are analysed as specific combinations or as a particular sequential arrangement of these components. Both approaches have been applied in the numerous attempts to explain the role that prosody (i.e. pitch, loudness, and quantity) plays in expressing and perceiving emotions. Relevant research has been conducted for more than a century by both psychologists and linguists. Only rarely, however, scientists of the two disciplines have worked together. This chapter will provide an overview of the most important studies and findings regarding the function of prosody in expressing and perceiving emotions.

Keywords: affect bursts, emotion expression, prosody, emotional dimensions, pitch, loudness/prominence, duration, fundamental frequency, voice intensity

1 Introduction

> We will now turn to the characteristic symptoms of Rage. Under this powerful emotion the action of the heart is much accelerated, or it may be much disturbed. The face reddens, or it becomes purple from the impeded return of the blood, or may turn deadly pale. The respiration is laboured, the chest heaves, and the dilated nostrils quiver. The whole body often trembles. The voice is affected. The teeth are clenched or ground together, and the muscular system is commonly stimulated to violent, almost

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> frantic action. But the gestures of a man in this state usually differ from the purposeless writhings and struggles of one suffering from an agony of pain; for they represent more or less plainly the act of striking or fighting with an enemy. (Darwin 1872: 74)

On the basis of Charles Darwin's description of the characteristic symptoms of rage the basic issues of this chapter can be introduced: Emotions like rage are accompanied by a number of phenomena, many of which enable others to perceive that a person is experiencing an emotional episode. These phenomena include (uncontrollable) bodily reactions, expressive behaviour, action, and – in the case of most human beings – verbal utterances. From the perspective of communication science, expressive behaviour, action and verbal utterances may be seen as means of several signalling systems to communicate emotions. One of these signalling systems is the human voice, which in Darwin's description forms the central characteristic – at least as far as the number of words are considered. "The voice is affected", Darwin (1872: 74) writes, but he does not describe in which way it is included in the expression of rage. This is a question numerous researchers have studied since Darwin's days and many of these studies will be reviewed in this chapter. It will start with two brief sections on the basic concepts *emotion* and *prosody*, then types of studies and the most important results – including an excursus on affect bursts – will be presented. Finally, a compositional approach to the communication of emotions will be introduced. This approach supports the findings that prosodic and vocal characteristics do not express discrete basic emotions but rather add components of emotional meaning to a multimodal communicative act on the basis of which a person is being perceived as emotional.

2 What are emotions?

Although in everyday communicative interaction we attribute emotions to other people relatively reliably, there is no exhaustive and widely accepted definition of the term *emotion* to date. This lack of a definition accompanies the complete history of emotion research. This is nothing particular to this subject of investigation but rather forms a characteristic of most central notions of disciplines in the social sciences – you only have to ask a linguist for a definition of *word* or *sentence*. However, of course there are a number of aspects that are widely agreed upon by emotion researchers forming a minimal consensus:

1. Generally, emotions form some kind of interface between the organism and its environment (cf. Scherer 1981: 310; Kleinginna and Kleinginna 1981: 355; Lazarus 1984; Stemmler 1984).
2. Emotions are conceptualised as episodical processes being "elicited when something happens that the organism considers to be of *relevance*, by being directly linked to its sensitivities, needs, goals, values, and general well-being" (Frijda and Scherer 2009: 143).
3. As a result of the appraisal of such events by the emotion experiencing human being, emotional processes include (for a [terminological] refinement of the following enumeration, see Sander, Grandjean, and Scherer [2018]):
   - Neuro-physiological reactions: uncontrollable bodily changes which are partly observable (e.g. transpiration, blushing, turning pale) partly only detectable by more

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or less complicated measures (e.g. heart rate, changes of temperature, electromyograms, blood pressure).
- Feelings: these are not observable but directly accessible only for the emotion experiencing individual. Feelings can be either labelled or reported, for example by the description of the current experience (cf. Fiehler 1990; Scherer 2009).
- Motor expression: observable changes in face, gesture, voice, kinetics, and proxemics. Since labelling a feeling or reporting an experience also form observable indicators of emotions, these can be included here as verbal expression.
- Change in action or action readiness: this part of the emotion process reflects the adaptive function of emotions, allowing the individual to immediately react appropriately to a specific event.

4. It is also widely accepted that the observable expression of emotion is generally controllable. Ekman and Friesen have introduced the term *display rules*. Control of expression refers to both the masking and the simulation of an emotion. Ekman and Friesen (1975: 138–139) enumerate four reasons for control of expression: "cultural display rules", "personal display rules", "vocational requirements" (e.g. of actors or diplomatic agents), and "need of the moment" (e.g. a false testimony in court). An elaborate typology of rules managing the interactive communication of emotions was established by Fiehler (1990). In addition to "Manifestationsregeln" 'rules of manifestation', that are comparable to display rules, he considers "Emotionsregeln" (a codification of feelings regarded appropriate and socially expectable in specific types of situations), "Kodierungsregeln" (social agreement of behaviour being regarded as an appropriate manifestation of a specific emotion), and "Korrespondenzregeln" (codifications of one's own emotion manifestation in correspondence to the emotion of the interlocutor). Concerning the communication of emotions, Fiehler regards the rules of emotion manifestation as being most important, thus turning expression from a mere concomitant phenomenon (cf. Planalp 1998: 29) to a crucial one. The "Emotionsregeln" point to the fact that not only the expression of emotions but also the evaluation of stimuli – their relevancy as well as their pleasantness or unpleasantness – is in part culturally determined. Accordingly, Guerrero, Andersen, and Trost (1998) point out that "although the basic emotions are innate, what elicits them and how they are expressed are at least partially dependent upon cultural factors. A snake may frighten a child from North America, but a child from certain parts of Africa may be filled with awe as snakes are considered to be mystical, sacred creatures" (Guerrero, Andersen, and Trost 1998: 11).

The cognitive appraisal of emotion inducing events occurs primarily in relation to the event's expectedness or unexpectedness, its general relevance for an individual, its pleasantness or unpleasantness, its impact on an individual's needs and goals, and the individual's potential to cope with the event in order to protect or achieve his or her individual needs or goals. All these form stimulus evaluation checks in the renowned component process model of emotions by Scherer (this model was introduced in the 1980s [cf. Scherer 1981] and has since then been described in numerous publications; a compressed introduction is included in Scherer [2013a] for example).

Emotions are (theoretically) described either as holistic, categorical phenomena or as multicomponential or multidimensional phenomena. Researchers following the first ap-

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proach, which can be traced back to Darwin's (1872) work, assume that there are a number of basic emotions which in earlier stages of human evolution had adaptive functions (cf. Darwin 1872: 27). It is believed that for these basic emotions, underlying "neuromotor affect programs" (Scherer and Ellgring 2007: 159) can be described. Hence, such holistic expression programs are being studied. The most famous of these studies are Ekman's and Friesen's studies of facial expressions of basic emotions (cf., for example, Ekman and Friesen 1975; Ekman 1983). The number of basic emotions varies from two to 18 (cf. Murray and Arnott 1993: 1098). In most cases anger, joy/happiness, fear, sadness, disgust, contempt, and surprise are stated as basic emotions (cf. Matsumoto and Ekman 2009). Other emotional qualities are considered as secondary or mixed types of the primary or basic emotions. In the dimensional approach emotions are seen as multicomponential phenomena characterised by specific qualities on two to four emotional dimensions. This approach was introduced by Wilhelm Wundt at the end of the 19th century (cf. for example Wundt 1897: 87–105) who differentiated the dimensions *Lust*/*Unlust* 'pleasure/displeasure', *Erregung*/*Beruhigung* 'arousal/calmness', and *Spannung*/*Lösung* 'tension/relaxation'. Meanwhile, emotion research widely agrees upon the four dimensions *valence* (pleasant/unpleasant), *activation*/*arousal* (excited/calm), *power*/*dominance* (strong/weak), and *novelty* (expected/unexpected) (cf. Fontaine et al. 2007; Fontaine 2009; Gillioz et al. 2016; Gentsch et al. 2017). Models in the context of appraisal theories, as Mortillaro et al. (2015: 340–341) put it,

> combine elements of dimensional models – emotions as emergent results of underlying dimensions – with elements of discrete theories – emotions have different subjective qualities – and add a definition of the cognitive mechanisms that cause emotion. [... Hence, they] offer a more flexible framework than discrete and dimensional models, being able to account for individual differences and variations of responses to the same stimulus by the same individual at two different moments in time. (Mortillaro et al. 2015: 340–341)

In the dimensional approaches and in many studies in the framework of appraisal theories, characteristics of emotion expression – including prosodic and vocal expression – are related to the aforementioned (semantic) components of emotional meaning.

All theories agree that emotions are only directly accessible via introspection, i.e. the interpretation of a specific feeling and neuro-physiological changes as well as expressive behaviour caused by some stimulus or event. All others – observers or communication partners – have to be told what a person is feeling in a situation or have to interpret the person's observable bodily reactions (e.g. blushing, turning pale, sweating), expression, and action.

3 What is prosody?

The lack of a widely accepted definition which was sketched for the term *emotion* can also be stated for prosody. A very general definition would determine prosody as characteristics of voice and manner of speaking that accompany verbal utterances. These characteristics include pitch, loudness/prominence and duration of segmental correlates as well as epiphenomena resulting from these, e.g. speech rate or rhythm (cf. Kehrein 2002). A definition

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which would be accepted by linguists and communication scientists is narrower and more specific than the notion of nonverbal vocal cues on which numerous psychological studies of emotion expression are focused. These vocal cues additionally include features of voice quality – often viewed as the result of special emotion-related muscle tension in or around the vocal tract (cf., for example, Scherer 1986; Scherer 2013a; Bänziger et al. 2014).

In linguistics and communication sciences, prosody is studied with respect to its phonetic aspects and with respect to phonological units carrying functions or meaning. An extensive definition of the phonetic aspects of prosody (i.e. prosodic features) combining the articulatory, the acoustical, and the auditory facets is the following: According to Schmidt (1986: 17–18) prosodic features are defined as

1. the auditory features duration, perceivable pitch and prominence,
2. the measurable acoustic features time span, fundamental frequency (f0) and intensity, and
3. the articulatory features temporal regulation of articulatory gestures, vibration characteristics of the vocal chords, and production and condition of expiratory air stream as far as these do not form intrinsic properties of the smallest syntagmatic segments of an utterance.

There is a complex relationship between the perceived loudness of speech – be it complete utterances or accented syllables – and its acoustic counterparts. Many experimental studies have shown that the single or combined manipulation of the three acoustic features f0, intensity and duration of segments influences the perceived loudness (cf. Heike 1969; Kohler 1991; Lagefoged 1993). Increasing mean f0 or f0 range, intensity, or duration of segments results in a perceived higher loudness and vice versa. These effects can be explained by the articulation processes of prosody. An increase of pitch is achieved by an increase in tension of the vocal cords, the vibration of which affords a higher amount of subglottal pressure. The latter simultaneously leads to an increase of loudness and measurable intensity. These complex relations have to be kept in mind when measuring the acoustics of emotional utterances.

Prosodic units on the phonological level can be defined as linguistic units that are based on prosodic features carrying distinctive functions on the lexical level and several linguistic or communicative functions on the postlexical, or utterance level. Concerning the functions on the utterance level, most researchers agree that prosody (i) has phrasing function, i.e. constituting or delimiting syntagmatic units, (ii) has functions in the organisation of the communicative interaction, and (iii) contributes to the semantics and pragmatics of utterances.

Regarding function (i), phrasing is achieved by the simultaneous production of global intonation patterns and pragmatic base units of spoken language (i.e. communicative actions). Hence, prosody delimits syntactic base units. There are two global intonation patterns, a falling and a rising one. The rising global intonation pattern additionally expresses that, according to the speaker, the communicative interaction has to proceed (either by him- or herself or by someone else). Some approaches describe the phrasing function of prosody via (final) boundary tones, differentiating between a high and a low boundary tone.

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Regarding function (ii), communicative interaction may be organised particularly by local intonation patterns. These can be placed on accented syllables of longer utterances or on discourse particles. Many of the latter do not carry any lexical meaning, hence, their meaning or function is marked by prosody alone. As Pistor (2016) has shown, four of these local intonation patterns on discourse particles have the potential to be linguistic universals (these four patterns form part of a larger inventory of local intonation patterns on discourse particles for German [cf. Schmidt 2001; Kehrein and Rabanus 2001]). Their communicative functions are: receiving or sustaining a turn ("turn holding"), requesting a reaction ("reaction"), turn closure or taking cognisance ("responding"), and – apart from organising communicative interaction – expressing a positive feeling or attitude of the speaker ("positive evaluation"). The latter is described in detail in Kehrein (2002) and will be mentioned again later when affect bursts are being presented.

Regarding function (iii), prosody contributes to the semantics and pragmatics of utterances mainly by the placement and strength of accents. Through accent placement, single components or utterances can be put into focus, while accent strength can mark components (lexical units or single syllables) as especially prominent. The placement of such accents of emphasis can carry varying functions in the context of interaction, for example constituting a contrast between the accented component and others.

Features of voice quality can vary independent of the use of prosodic units with linguistic or communicative functions. The phonetic, and above all the articulatory, interrelation of prosody and voice quality is complex and only little is known about it. Generally, changes of voice quality are analysed globally, i.e. covering an entire utterance, by the calculation of (changes in) mean values or standard deviation of spectral or energy parameters.

4 How are prosody, other vocal cues and emotions related and how is this relationship being studied?

Investigations of the prosodic and/or vocal expression or communication of emotions are being conducted by psychologists, communication scientists, phoneticians, and linguists with special interest in prosody. Only rarely have researchers of these different disciplines worked together so far. The disciplines involved in research on the prosodic/vocal expression of emotion each focus on specific aspects of the subject. Psychologists are interested in characteristics of emotion expression when individuals experience emotional processes. In many cases vocal changes resulting from specific muscular tension or laxness during an emotional process are being studied. It remains unclear, however, if such changes in muscular tension may be regarded as parts of neuro-physiological changes related to the relevant emotion or as motor expression, hence, being subject to control, for example in order to meet the demands of social display rules. For researchers of linguistic and communication science, it is irrelevant whether an individual is really undergoing an emotional process as long as he or she is perceived as "being emotional". The main task in the analyses of these disciplines is finding out why such an impression arises and which parts of the

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individual's multimodal communicative behaviour, i.e. which signalling systems contribute to this impression, while also taking into consideration the linguistic and situational context of interaction. One of the signalling systems involved is the prosody of an utterance and/or other characteristics of the voice.

Dusenbury and Knower summarised these complex issues 80 years ago and made suggestions on how this problem of complexity could be solved:

> The [...] common use of symbolic activity and tonal codes not only appears in connection with the use of language codes, but also usually appears in a situational context. Both of these factors may contribute to the meaning ordinarily associated with the nonlinguistic codes. In light of these facts, it would appear useful to set up experimental studies to analyze the exact values of the symbolic codes of action and voice when used alone. (Dusenbury and Knower 1938: 425)

The fundamental problems of any research of emotion expression or communication are captured by this summary, i.e. multimodality of expression and contextual influence. The solution suggested (and applied in their own study) has been applied in many studies of the expression of emotion: concentrating on one isolated "channel" of the emotion expression, e.g. facial or vocal expression, and studying respective utterances context-free experimentally. This method, however, disregards the facts that any communicative behaviour is multimodal and embedded in a context.

Probably, this experimental reduction is caused by two other problems with which research of emotion expression is confronted:

1. Intensive emotions, like the basic emotions which are the object of investigation, are expressed and observable only rarely in everyday communication, since their expression is controlled by display rules.
2. Since many studies of vocal emotion expression want to base their analyses on "objective" acoustic measurements, data allowing for such measurements are needed. The easiest way to obtain such data is an experimental setting.

Altogether, studies on prosodic or vocal emotion expression can be classified by the way in which the data have been collected and hence, by the quality of the data analysed. The below subsections will detail four general categories that researchers look at when studying emotions.

4.1 "Natural"/spontaneous/felt emotions

The studies summarised here have in common that the emotion expression studied is not directly influenced by the researcher or simulated by actors. It rather occurs in some kind of action or interaction the participants are involved in. Some speak of "natural" emotions, although the notion of "naturalness" can be discussed controversially. Others name this kind of emotion expression "spontaneous", while Juslin, Laukka, and Bänziger (2018: 3) mainly base the distinction between spontaneous and simulated emotions on the idea that spontaneous emotion expressions are more likely to reflect "felt emotions" than simulated (or posed) emotion expressions.

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Since non-induced and non-simulated emotion expression – as already mentioned – only occurs rather rarely in most everyday communication and if it occurs it is not very intense as a general rule (cf. Juslin, Laukka, and Bänziger 2018), researchers had to be creative in finding data of "natural" or spontaneous emotion expression. Hence, there is a considerable range and diversity of data that have been analysed. Among these are conversations of doctors or psychologists with their patients, often patients suffering from depression, or other types of clinical interviews (cf. Zuberbier 1957; Eldred and Price 1958; Hargreaves et al. 1965; Roessler and Lester 1976 and 1979; With and Kaiser 2011), recordings of pilots or astronauts undergoing dangerous episodes (sometimes even the last radiograms prior to a plane crash were analysed; cf. Williams and Stevens 1969; Simonov and Frolov 1973; Kuroda et al. 1976; Šulc 1977; Roessler and Lester 1979), or the live broadcast of the Hindenburg crash (Williams and Stevens 1969). Other researchers analysed different kinds of (telephone) conversations (Dascălu-Jinga 1992; Moosmüller et al. 1995; Erickson et al. 2008; Oliveira Jr. et al. 2014), public speeches (Hicks 1979), university lectures, or discussions (Huttar 1968). As a kind of semi-natural conversation, Scherer et al. (1984) studied the emotion expression of "German social agency workers" being called by actors pretending to be clients.

In the last two decades a number of corpora of spontaneous emotion expression have been assembled. These include recordings of:

a. participants interacting in the context of games (cf. Kehrein 2002; Johnstone et al. 2005; Cullen et al. 2006; Truong et al. 2012);
b. participants engaging in Wizard-of-Oz tasks (cf. Aubergé et al. 2004; Gnjatović and Rösner 2010);
c. participants in human-machine interaction (Neiberg et al. 2006; Cullen et al. 2008; Seppi et al. 2010); or
d. television (talk) shows (cf. Douglas-Cowie et al. 2007; Grimm et al. 2008), broadcasted political debates (cf. Kim et al. 2014), or "nonlinguistic vocalizations" collected from YouTube videos (cf. Anikin and Persson 2017).

As a consequence of display rules and judicial restrictions on making concealed recordings of people, the range of emotions that could be studied in the aforementioned investigations is quite limited. The following emotions have been studied: depression (one could even question if this is an emotion at all, since normally it lasts longer than emotional episodes), anger, fear/panic, mental pressure, insecurity, contentment, doubtlessness, irritation, enthusiasm, politeness, and arousal. Most of these are not very intense emotions, and the acoustic quality of the recordings is not very high in most cases. Exceptions are the corpora that have been built up recently and the studies of interactions in the context of games. In these studies data can be collected under laboratory conditions, this means recording speakers in soundproof rooms and on separate channels (e.g. in Kehrein 2002; Cullen et al. 2006). Hence, the quality of these data allows for acoustic analyses.

4.2 Induced emotions

In psychological emotion research many different methods to evoke a specific emotion in a test person are known. In an early study Skinner (1935) tried to arouse happiness or

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sadness by texts and background music. In other studies subjects were confronted with difficult or unexpected tasks (cf. Bonner 1943; Scherer et al. 1985), requested to lie in order to evoke stress (cf. Alpert et al. 1963; Scherer 1977; Streeter et al. 1979; Ekman et al. 1980), were hypnotised (cf. Havrdová and Morávek 1979), exposed to various (unpleasant) stimuli (cf. Bonner 1943; Scherer et al. 1985), or asked to speak sentences with which specific emotions were uttered verbally (the so-called Velten method; cf. Shahid, Krahmer and Swerts 2008; Scherer 2013b). In all these experiments the induced emotions again were not very intense because all experimental influence on test persons has to pass the ethics committee. Hence, emotions studied by experimental induction only cover a narrow spectrum, namely happiness, grief, fear, and stress.

4.3 Simulated emotions

Most surprisingly, large parts of the psychological research on emotion expression relies on the talent of actors or even non-actors in portraying emotions, which were defined as (partly uncontrollable) organismic reactions to external stimuli. The methodological compromise of working with actors is comprehensible when the methodological problems sketched above and the lack of intensity and variability of "natural" and induced emotions are considered. As Juslin, Laukka, and Bänziger (2018) have recently shown, simulated and spontaneous emotion expression mainly differ with respect to their intensity, but also in some acoustic features of "fundamental frequency (range, contour, jitter) and voice intensity" (Juslin, Laukka, and Bänziger 2018: 26). While results of studies with portrayed emotion expression may well serve as heuristic cues of characteristics of the expression of emotions, it has to be thoroughly pondered how far the analyses may lead without becoming unreliable.

The method applied is more or less the same in all of the numerous studies (e.g. Wallbott and Scherer 1986; Scherer et al. 1991; Banse and Scherer 1996; Davitz 1964a; Tischer 1993; Nygaard and Lunders 2002; Paeschke 2003; Colamarco and Moraes 2008; Erickson 2010; Lee and Choi 2010; Patel et al. 2010; Garrido et al. 2012; Lin and Fon 2012; Bartkova et al. 2016; Kim et al. 2016; Wang et al. 2016). Speakers are asked to perform the expression of selected emotions. Sometimes they work together with a director, sometimes they are referred to the method proposed by Stanislawski, which can be summarised as *try to feel or experience what you are planning to portray* (cf. Stanislawski 1992: 48). In studies on vocal emotion expression, the actors speak standardised utterances in a neutral manner and in several emotional qualities. These utterances include the alphabet, single vowels, sentences that are semantically non-emotional, or nonsense/pseudo sentences being constructed with (combinations of) syllables corresponding to the typical syllable structures of the respective language. Many recent studies are working with such nonsense sentences, probably as a reaction to criticism by communication researchers pointing out that the semantics of sentences is never non-emotional since utterances never stand alone in everyday communication. This way of data collection was meant to guarantee that any vocal difference between the "neutral" and all other versions of the respective utterances can be described as part of the vocal expression of the respective emotion.

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On the one hand, the simulation of emotions by actors has a number of advantages: (i) It is possible to compare sets of segmentally (nearly) identical utterances. (ii) The recordings can be conducted under ideal conditions, i.e. in soundproof rooms, resulting in high quality data. (iii) There are no limits to the number and variability of emotions studied. (iv) Actors are able to perform emotions with high intensity, which will hardly ever be observable in everyday communication. On the other hand, there are also a number of disadvantages observable: (i) Considerable differences in the actors' performance are reported in the studies (cf. Wallbott and Scherer 1986; Scherer et al. 1991; Banse and Scherer 1996; Davitz 1964a). (ii) Partly as a result of this, in identification tasks, test persons often perform rather poorly when being asked to assign emotion labels to the actors' portrayals, even if they only have to choose from a limited set of rather divergent emotional qualities, e.g. a set of basic emotions (cf. Scherer et al. 1991; Banse and Scherer 1996; Tischer 1993; Paeschke 2003). Goudbeek and Scherer (2009) speak of "consistent differences in vocal recognition accuracy between emotions, with sadness and anger being recognized best, followed by fear. Disgust, joy, and despair are recognized least well vocally" (Goudbeek and Scherer 2009: 406). Identification tasks with laypersons as raters are omitted in recent studies. (iii) In the analyses vocal and prosodic differences are merely compared as mean values of different features. The option that, for example, a higher f0 range is the result of a higher number of strong accents (e.g. accents of emphasis) is not considered. (iv) The high quality of the recordings tempts researchers to analyse acoustic features, the auditory relevance of which has never been proven (see below).

4.4 (Re-)Synthesised stimuli

By working with manipulated or synthesised stimuli, researchers are following one of two intentions. On the one hand they aim to mask an utterance's verbal information. Hence, sequences of sine tones are synthesised (cf. Scherer 1979; Scherer and Oshinski 1977, 1982) or recordings of human utterances are manipulated by filtering their verbal content (cf. Knower 1941; Scherer et al. 1972; Ohala 1982). On the other hand, via resynthesis, i.e. the controlled manipulation of single acoustic features of speech recordings, the relevance of these features for the expression of specific emotions can be tested. In these investigations parameters of f0 have been studied in the first instance (cf. Uldall 1960; Smith et al. 1975; Ladd et al. 1985; Bergmann et al. 1985; Bond et al. 1987; Erickson et al. 2008; Shaikh, Rebordao, and Hirose 2010; Steidl et al. 2012; Wang et al. 2012; Amir and Globerson 2014; Petrone et al. 2016). Parameters that have been resynthesised in these studies are: mean f0, f0 variation, f0 contour, f0 range, jitter, mean intensity, variation of intensity, and speech rate.

The data are analysed auditorily or acoustically. In auditory analyses, test persons or experts rate the stimuli according to their impressionistic vocal sound. Rating scales include pairs of adjectives referring to relatively clear aspects of an utterance's prosody, such as *high-low*, *loud-soft*, or *fast-slow*, or voice quality, such as *steady-flattering*. However, sometimes these scales also contain adjectives referring to qualities which already touch the semantic field of emotions, like "sharp-flat, warm-cold, pleasant-unpleasant, disrupted-even, impulsive-reverberant, thick-thin" (Green and Cliff 1975). Such overlap of levels

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of description should be avoided. The number of acoustic features studied ranges from one (Bond et al. 1987 studying mean f0) to 125 in the case of Tischer (1993). In many cases neither number nor choice of the acoustic parameters studied are explicated or motivated. Since we are talking about perceivable emotion expression, such motivation should always refer to the auditory relevance and equivalent of the acoustic feature(s) in question. The mere measurability of acoustic parameters does not suffice as selection criteria. For example, what do I perceive if in a voiceless passage of an utterance there is an increase in spectral energy between 4000 and 5000 Hz (this is one of the features studied by Banse and Scherer 1996)? However, the already mentioned complex relations of acoustic and auditory features remain widely unclear to date. There is neither a "catalogue" of perceivable vocal characteristics which can be identified with interindividual agreement, nor knowledge of their equivalents in the physical signal. An exception is the study by van Bezooijen (1984), who correlated listeners' ratings of perceived tempo, pitch level, pitch range, harshness, loudness, laryngeal tension, and laryngeal laxness and selected acoustic measures supposedly representing the perceptual characteristics. Her results show that perceived tempo, pitch level, and pitch range are best represented by the measures "syllables per second without pauses", "f0 median" (however, there is no considerable difference to the f0 mean), and "f0 variation coefficient". These three are also the variables accounting for most of the variance in a discriminant analysis testing the discriminating power of the acoustic measures with regard to discrete emotions (cf. van Bezooijen 1984: 58–69). Recently, Bänziger, Patel, and Scherer (2014) conducted a similar study. They state that "there is an urgent need to establish a standardized list of voice features that (a) can be reliably rated by non-expert raters and (b) that are likely to be crucially involved in emotional expression and communication in everyday speech" (Bänziger, Patel, and Scherer 2014: 33). Moreover, they resume that the identification of "auditory cues for certain emotions that listeners perceive but for which we have as yet no appropriate measurement procedures on the level of acoustic parameters [...] deserves high priority for future research" (Bänziger, Patel, and Scherer 2014: 50–51).

5 What do we know about the relationship of prosodic or vocal features and emotions?

5.1 Prosodic correlates of basic emotions

As far as the quest for more or less fixed patterns of vocal expression for basic emotions is concerned, only rather limited output can be observed. As mentioned before, most studies have aimed at finding correlations between play-acted emotions and specific changes of acoustic features. Now, if we only compare some of the research overviews of the last two and a half decades (e.g. Murray and Arnott 1993; Johnstone and Scherer 2000; Kehrein 2002; Scherer 2003; Laukka 2004; Goudbeek and Scherer 2009; Schiewer 2014), we can conclude that most of the acoustic parameters studied seem to be irrelevant for the expression of basic emotions. According to these summaries, relevant features are (mean) intensi-

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Tab. 36.1: Profiles of acoustic features reflecting the vocal expression of basic emotions (based on the research reviews by Murray and Arnott [1993], Kehrein [2002], and Goudbeek and Scherer [2009]).

		Stress	Anger/ rage	Fear/ panic	Sadness	Happiness/ joy/elation	Disgust	Boredom
Speech rate	M&A 1993		slightly faster	much faster	slightly slower	faster or slower	very much slower	
	K 2002	n.s.	(fast)	(fast)	slow	(fast)	slow	slow
	G&S 2009	n.s.	↑	↑	↓	(↑)		↓
Intensity	M&A 1993		higher	normal	lower	higher	lower	
	K 2002	n.s.	high	(low)	low	high	low	low
	G&S 2009	↑	↑	↑	↓	↑		n.s.
f0 mean	M&A 1993		very much higher	very much higher	slightly lower	much higher	very much lower	
	K 2002	high	high	(high)	low	(high)	low	low
	G&S 2009	↑	↑	↑	↓	↑		n.s.
f0 range	M&A 1993		much wider	much wider	slightly narrower	much wider	slightly wider	
	K 2002	n.s.	wide	wide	narrow	(wide)	n.s.	n.s.
	G&S 2009	n.s.	↑	↑ (↓)	↓	↑		↓
f0 variation	K 2002	n.s.	high	high	n.s.	(high)	medium	n.s.
	G&S 2009	n.s.	↑	n.s.	↓	↑		↓

Note: The arrows point at an increase or decrease of the respective parameter, "n.s." means 'not specified', whereas grey-shaded table elements indicate that the respective emotion was not included in the review.

ty, f0 level (expressed as f0 mean or floor), f0 range, f0 variation/variability, speech or articulation rate. Murray and Arnott (1993) additionally enumerate a category "voice quality" with several impressionistic characteristics and a category (manner of) "articulation". Johnstone and Scherer (2000), Scherer (2003), and Goudbeek and Scherer (2009) add the categories "sentence contours" and "high frequency energy", which is claimed to be an acoustic correlate of voice quality: "As the proportion of high-frequency energy in the acoustic spectrum increases, the voice sounds more 'sharp' and less 'soft'" (Laukka 2004: 17). Table 36.1 integrates and compares the (comparable) knowledge reflected in the research reviews.

Distinct profiles for single emotions which differentiate them clearly from all other basic emotions cannot be deduced from the results obtained thus far. Moreover, the bracketed entries of Kehrein (2002) only point at the specifications of an acoustic parameter obtained in most of the studies considered. But in other studies, the opposite specifications were observed. Such deviating results are explained by different subtypes of a basic emotion that has been acted by an actor, for example hot vs. cold anger, or by the fact that

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emotions trigger different kinds of reaction, for example fear may be accompanied by maximal activation of a flight reaction but also by the complete immobility of a shock-induced paralysis (cf. Kehrein 2002). Laukka (2004) evaluates the state of knowledge differently and summarises: "The results concerning the prosodic expression of emotion are fairly clear. It is well established that mean, range, and variability of F_0 rises for 'active' emotions (e.g. anger, fear, happiness), and decreases for 'passive' emotions (e.g. sadness). Also, voice intensity increases for anger and decreases in sadness, and the speech rate is faster for anger, fear, and happiness, than for sadness" (Laukka 2004: 17). The fact that only rather general and unspecific results have been obtained so far indicates that there are no emotion-specific vocal patterns and that basic emotions are not expressed or communicated exclusively by the voice. Furthermore, it becomes clear that digging ever deeper, in the sense of extending the number of acoustic features studied (often without knowing which perceptual impression is reflected by these), does not result in more clarity. This discernment runs like a common thread through the history of research on vocal emotion expression. Three examples will illustrate this: Davitz (1964b) in his research review reports that "the research to date offers a few limited clues about vocal characteristics of emotional expression, but these clues have not been consistently helpful in identifying speech correlates of particular feeling states" (Davitz 1964b: 25–26). Nearly 30 years later Kappas, Hess, and Scherer (1991) conclude that "we might have to give up the search for a handful of vocal parameters that serve as a 'window to our soul' and instead accept the idea that vocal cues to emotion, like the cues that other modalities offer, are deeply embedded in the psychological attribution context" (Kappas, Hess, and Scherer 1991: 229). In a recent research review Juslin, Laukka, and Bänziger (2018) state that "attempts to find emotion-specific patterns of voice cues have been only partially successful, and have tended to produce inconsistent findings [... and that] a commonly proposed explanation is that the voice does not actually convey discrete emotions" (Juslin, Laukka, and Bänziger 2018: 2).

5.2 Prosodic features correlating with the four dimensions of emotion

It can be seen, in the above section, that tagging prosodic features to specific emotions can be problematic, and as a consequence of the "poor earnings" of those studies looking for vocal patterns expressing discrete emotions, some researchers modified their aims to finding multimodal patterns of emotion expression. Although extension of the research focus is generally welcome, since thereby fundamental principles of communicative science are considered in psychological research, both grounding the studies on simulated emotions and continuing the search for fixed profiles of expression have to be questioned. Hence, the first results of such studies are not very encouraging. Scherer and Ellgring (2007) conclude:

> Although several coherent unimodal clusters are identified, the results show only 3 multimodal clusters: agitation, resignation, and joyful surprise, with only the latter being specific to a particular emotion. Finding variable expressions rather than prototypical patterns seems consistent with the notion that emotional expression is differentially driven by the results of sequential appraisal checks, as postulated by componential appraisal theories. (Scherer and Ellgring 2007: 158)

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The conclusion drawn by Scherer and Ellgring points in the right direction: features of emotion expression are related to single components of the appraisal process and hence reflect components of emotional meaning, especially the ones specified by the four dimensions of emotional meaning: novelty, valence, arousal/activation, and power/dominance. This approach is not new. Prosodic or vocal features have been related to the dimensions of emotional meaning before. In some studies, impressionistic voice-related qualities are collected by listener judgements, for example Gillioz et al. (2016) describe "spoke in a firm voice" and "spoke louder" for high power and "had a trembling voice" for low power. Speaking tempo or speech rate are often mentioned to be relevant to the arousal/activation dimension, meaning that high tempo is correlated to high arousal and vice versa (cf. Kehrein 2002; Scherer and Ellgring 2007; Scherer et al. 2015). Faucal expansion vs. constriction at least since Trojan ([1948] 1952) is claimed to contribute to the expression of pleasantness vs. unpleasantness (also see Scherer 2013a; Mortillaro, Meuleman, and Scherer 2015). Especially in the case of disgust, faucal constriction seems to be a neuro-physiological bodily reaction. Concerning the power/dominance dimension, mean f0 (or f0 level) and intensity (or amplitude) are found to express high power by low mean f0 and high intensity as opposed to low power by high or raised mean f0 and low intensity (cf. Scherer 2013a; Mortillaro, Meuleman, and Scherer 2015). According to Kehrein (2002), the acoustic features relevant for the power/dominance dimension are mean intensity and f0 range, both of which are high when emotions of high power/dominance are communicated and vice versa. The most important correlations are summarised in Table 36.2, particularly based on Kehrein (2002), and Scherer (2013a).

Tab. 36.2: Acoustic features reflecting the vocal expression of dimensions of emotional meaning (based on the research reviews by Kehrein [2002], and Scherer [2013a]).

	Novelty	**Valence**		**Arousal/Activation**		**Power/Dominance**	
	unexpected	**pleasantness**	**unpleasantness**	**high arousal**	**low arousal**	**high power**	**low power**
Speech rate	n.s.	slow	fast	fast	slow	(fast)	slow (due to long pauses)
Intensity	n.s.	ebbing (decrescendo)	rising (crescendo)	high	n.s.	high	steeply falling
f0 mean/ level	high (peak)	(high)	n.s.	high	low	low	high
f0 range	n.s.	narrow	n.s.	wide	n.s.	wide	n.s.
f0 variation	n.s.	(low)	medium	high	medium	high	medium
vowel duration	n.s.	long	short	n.s.	n.s.	(long)	short
voice quality	audible inhalation	wide voice (due to faucal expansion)	narrow voice (due to faucal constriction)	n.s.	n.s.	full voice	thin voice

Note: For the dimension *novelty* only "unexpected" is included since for expectedness no changes in prosody and voice can be observed; "n.s." means 'not specified', bracketed entries reveal that there are contradicting observations in different studies with the entries being observed most often.

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Table 36.2 reveals that in most cases the extremes of the semantic dimensions are characterised by opposite properties of the acoustic parameters studied. However, there are still no patterns of acoustic characteristics explicitly pointing at specific emotions. The best empirical evidence for this conclusion lies in the overall low recognition rates for discrete emotions in perception experiments. Tischer (1993: 159) concludes that it remains unlikely that the perception of a verbal utterance enables an observer to attribute exactly one emotion to the speaker without any information about the context in which he or she has made the utterance.

5.3 Affect bursts and affect emblems

Vocal patterns (as well as facial expressions), for at least some specific emotions, can most likely be found among the type of utterances Scherer (1994) termed "affect bursts". These are defined as comprising "both nonspeech sounds (e.g., laughter) and interjections with a phonemic structure (e.g., Yeah! [Schröder 2003]), including raw affect bursts directly arising from physiological changes. These bursts are barely conventionalized and thus relatively universal and language-independent. Also included are affect emblems, which are determined by sociocultural norms, and show a high degree of culture and language dependency" (Krumhuber and Scherer 2011: 825). Affect bursts from an evolutionary perspective may be regarded as rather high-intensity emotion expressions which might "occur in situations associated with basic survival problems that various organisms have in common, such as avoiding predators, finding food, competing for resources, and caring for offspring" (Juslin, Laukka, and Bänziger 2018: 6).

Leaving aside raw affect bursts like laughter, growls, yawns, and sighs, the vocalisations of some emotions seem to be candidates for classification as affect emblems. In many cases the segmental or phonemic structure seems to be the primary cue to the emotion expressed (at least they are recognised on the basis of orthographic transcriptions alone; cf. Schröder 2003). According to the study of Schröder (2003: 109), in the case of German these are vocalisations for admiration ("Wow, Boah"), disgust ("Buäh, Igitt, Ih"), elation ("Ja, Yippie, Hurra"), contempt ("Pah"), and to a lesser extent relief ("Uff, Puh") and worry ("Oje, Oweh"). All of the cited utterances are interjections that have entries in German lexica clearly referring to the emotions cited (in the case of disgust, the lexicon entries are "bäh", "Igitt", and "i"). Other emotions cannot be recognised on the basis of the orthographic transcriptions. These are threat ("Hey, Growl"), boredom ("Yawn, Sigh, Hmm"), startle ("Int[ake of]. breath, Ah"), and anger ("Growl, Breath out, Oh"; Schröder 2003: 109–110). The segmental bases of these emotion expressions do not have lexicon entries or – in the case of "Hey", "Hmm", "Ah", and "Oh" – have entries that are semantically ambiguous. Rather, the respective affect vocalisations seem to be recognised on the basis of prosodic or vocal cues.

Hawk et al. (2009) were able to show that generally "many affect vocalizations can communicate important emotion information in the absence of contextual information or visual cues" (Hawk et al. 2009: 303). Compared to facial expression and "speech embedded prosody" non-linguistic vocalisations are better recognised for the emotions anger, con-

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tempt, disgust, fear, and sadness (Hawk et al. 2009: 302). In this study it remains unclear, however, whether the segmental structure or prosodic and vocal cues are the relevant information in the identification process. According to the authors, a clear-cut distinction between "raw" affect bursts and conventionalised affect emblems cannot easily be made.

Finally, Laukka et al. (2013) found that some of their selected positive and negative emotions expressed by "non-linguistic emotion vocalizations" can be recognised with "accuracy above chance in at least some cultural conditions [i.e., emotions playacted by actors from India, Kenya, Singapore and the US are recognised by Swedish participants]" (Laukka et al. 2013: 3).

In none of these studies, however, is the prosodic or vocal quality of the respective affect vocalisations described in detail. Only Schröder (2003) offers some rough transcriptions and states that "in order to investigate that question more seriously, acoustic analyses, including F0 measures, would be the appropriate starting point, rather than the crude pitch descriptions presented" in his article (Schröder 2003: 113). However, to date there are no elaborate descriptions of vocal patterns of affect bursts or affect emblems expressing discrete emotions. This means that affect bursts and affect emblems are relatively well recognised context-free, but a large portion of this recognisability seems to be based on their segmental or phonemic structure. Hence, there is no evidence, yet, for prosodic or vocal patterns of discrete emotions expressed by affect bursts or affect emblems.

While even for reactions which have been defined as "very brief, discrete nonverbal expressions of affect" (Scherer 1994: 170) no discrete vocal patterns could be proven, evidence was found that vocal characteristics of such brief expressions refer to single components of the appraisal process of emotional episodes (cf. Patel et al. 2011) or to single qualities of the emotional dimensions (cf. Kehrein 2002). According to Patel et al. (2011), tension (phonatory effort) is related to sympathetic arousal, while phonation perturbation and phonatory frequency are related to the coping potential component (i.e. power and ability to control). Kehrein (2002) was able to show that on discourse particles (or on accented syllables within longer utterances) a local intonation pattern can be observed expressing positive feeling or evaluation. This intonation pattern is prosodically complex: a high f0 peak contour is accompanied by a rising-falling intensity contour with a dip simultaneously to the f0 peak. Moreover, the syllables or particles on which this intonation contour is placed are characterised by a longer duration compared to surrounding syllables. When this local intonation contour is realised on a discourse particle "hm" (i.e. segmentally lacking any semantic meaning) listeners "translate" the discourse particle's meaning as "yummy!" or "great!" (cf. Schmidt 2001). The actual translation depends on the context in which the discourse particle is expressed. The intonation contour only contributes the semantic component 'pleasantness' to the complete utterance.

6 Communicating emotions prosodically/vocally – a compositional approach

The previous research review has revealed that emotions cannot be expressed or communicated exclusively prosodically or vocally (even in the case of affect bursts or affect em-

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blems, there is no evidence for prosodic or vocal patterns expressing discrete emotions, since for some of these the quality of the segmental basis contributes to their recognisability). Characteristics of the voice only contribute to the communication of emotions together with other perceivable characteristics of motor expression, neuro-physiological reactions, verbal expression and other kinds of action. These observations may be integrated in a compositional approach:

Emotions – in most general terms – have been defined as an interface between the organism and its environment. This means that during an emotional episode an individual perceives – or imagines – an event or stimulus, the appraisal of which causes specific reactions of the individual. These include feelings, neuro-physiological reactions, motor expression, and action (including communicative action) or at least action tendencies. All perceivable reactions considered together in the specific situational and communicative context serve as indicators or symptoms of specific emotions, which are attributed to the individual by observers or communication partners. When observed in their concrete context such attributions are made with a high degree of interindividual agreement (cf. Planalp, DeFrancisco, and Rutherford 1996; Kehrein 2002; Kosti et al. 2017). Kosti et al. (2017), studying emotions on the basis of pictures, even state that "if we consider context, we can make reasonable guesses about emotional states even when the face of the person [is] not visible" (Kosti et al. 2017: 1668). However, fixed patterns of, for example, vocal or prosodic emotion expression which can be identified in isolated utterances, i.e. without context, have not been found in about a century of research. Planalp (1998), referring to the aforementioned statement by Kappas, Hess, and Scherer (1991), summarises the state of the art in a similar way: She says that "they admit that 'we might have to give up the search for a handful of vocal parameters that serve as a *window to our soul*' (p. 229) and explore how vocal cues are interpreted, presumably by real human beings in actual communicative encounters" (Planalp 1998: 34).

Taking these observations into consideration, we can conclude that types of context (concerning the communicative interaction and the situation) form integral parts of emotional episodes (see also Planalp, DeFrancisco, and Rutherford 1996: 148). This is anything but new: Aristotle in his "Art of rhetoric" already defined situational prerequisites as characteristics of specific emotions (cf. Aristotle 1926). Moreover, Tischer (1993) presented an elaborate collection of situational characteristics of emotional processes. The importance of the situational context and the evaluation of this context is also reflected by the fact that these belong to the mental representation of emotional knowledge (cf. Averill 1980; Fiehler 1990; Wierzbicka 1999). Accordingly, Gentsch et al. (2017) could recently prove experimentally "that contextual information can influence significant parts of the meaning of emotion words" (Gentsch et al. 2017: 9). Hess and Hareli (2016), in their *model of the meaning of emotion expressions in context* (MEEC), even suggest that the influence between expression and context is bidirectional. This means that on the one hand, the context has an effect on the specific interpretation of a person's expression and that on the other hand, an observable expression can influence the interpretation of the situation in which this expression is shown. Concerning the perception of spoken utterances, Cauldwell (2000) was able to show in his paper "Where did the anger go?" that an utterance which was perceived as expressing anger when presented without any contextual information was

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perceived as emotionally "neutral" when presented in the context of interaction. On the contrary, in my own study, emotions have been attributed to speakers on the basis of utterances which do not display any special "emotional" characteristics. In the respective utterances the speakers simply have not shown the opposite emotion – which they have shown before (cf. Kehrein 2002).

All these findings support the conclusion that emotions do not exist in a "decontextualised" state, neither when they are experienced nor when they are observed and attributed to others. Since emotions like anger, happiness, or fear – as already mentioned – are attributed to others with a high degree of interpersonal agreement when observed in context, in the compositional approach presented here such emotions are considered as holistic categories of perception. "Holistic" means that all signalling systems available are taken into consideration when the emotional state of others or oneself is perceived or experienced. In a telephone conversation, for example, all visual signalling systems like facial expression or gestures are not available and hence cannot contribute to emotion recognition. The methodological consequence of this perspective on emotion expression and communication is that any study of these issues has to be grounded on the observation of a person as being in an emotional state in a specific situational and/or communicative context. In studies on facial expression, contextual information can be presented by adding a picture of the emotion triggering event (cf. Kosti et al. 2017). For studies on verbal utterances including characteristics of the voice, the survey of perceptive judgements is much more elaborate, since people are best observed for the complete period of a communicative interaction. In my own study for example (cf. Kehrein 2002), three raters listened to five communicative interactions with a duration of 30 to 45 minutes each and were asked to mark all utterances (in the respective transcript) in which they perceived the speaker as experiencing an emotional episode. These were auditory judgements since the visual channel was omitted in the interactions, too. This rather time-consuming method of identifying emotional utterances revealed a number of clear results: Although most emotions expressed were only of rather low intensity, there were no contradictory judgements which were often reported in studies in which isolated utterances were judged. In the analysis of the utterances judged as emotional, again all signalling systems have to be taken into consideration (at least the ones which have been available for the interacting people), thus being a multimodal analysis. The aim is finding out "how cues are combined into complex, multichannel messages about emotion" (Planalp 1998: 37). The analysis begins with the study of the general interactive behaviour. In extreme cases, keeping silent, thus opting not to interact, can be interpreted as emotion "expression". In this step of the study, methods of conversational analysis are applied. The next step is finding out the respective utterance's illocution and comparing the utterance's literal and its pragmatic meaning. Finally, the question of which features out of all signalling systems contribute to the emotion attribution must be addressed. In this step, not only characteristics of the speaking style and all linguistic levels are considered, but also expressive features of the body language (mimics, gestures, kinetics, proxemics). In the analysis of prosody, prosodic units with linguistic or communicative functions have to be considered when analysing the acoustic quality of utterances. For example, the overall f0 range and intensity of an utterance can be the result of a larger number of emphasising accents placed by the speaker. This does not necessarily reflect a

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speaker's emotion. However, such differentiating analyses have only been done very rarely (cf. Kehrein 2002; for the relevance of other linguistic units in emotion expression, see Colamarco and Moraes 2008; Lee and Choi 2010; Seppi et al. 2010; Shaikh, Rebordao, and Hirose 2010; Wang et al. 2012; Cao et al. 2014; Kim et al. 2016).

The results of my own study and the research review have revealed that the (emotional) meaning of utterances is assembled by single specific semantic components of the emotions attributed to the speaker. Each component is expressed by one or more of the signalling systems involved. As far as prosody and other vocal characteristics are concerned, we have seen that semantic components of the emotion dimensions *novelty*, *arousal*/*activation*, and *dominance*/*power* are expressed in the first instance. These are speech rate changes for *arousal*/*activation*, changes related to the overall loudness of an utterance for *dominance*/*power*, and at least an initial high pitch or pitch peak (often preceded by an audible sudden inhalation of air) for *novelty*. These are the features which are most widely and consistently observed in the respective studies. Additionally, some vocal features also express semantic components related to the *valence* dimension. These are caused by neurophysiological reactions like the faucal (pharyngeal) or laryngeal expansion or constriction or by the motor expression of other signalling systems, e.g. facial expression like the movement of the lip corners resulting in a modification of the length of the vocal tract. However, pleasantness or unpleasantness are more likely expressed by other signalling systems like the verbal content of utterances (e.g. by giving consent or disagreement or by complementing or criticising someone) or by facial expression (e.g. movement of the lip corners or the activity of the corrugator supercilii muscle).

Additional evidence for the relevance of prosodic characteristics on the aforementioned emotion dimensions comes from a study by Planalp, DeFrancisco, and Rutherford (1996). In this study participants were asked "to monitor a person they knew well [... and] fill out a brief questionnaire the first time they noticed the other person experiencing an emotion. One format asked them to list the cues they detected; the other told them to describe in their own words 'how they could tell' that the other was feeling an emotion" (Planalp 1998: 38). Taken together, cues from 11 categories were differentiated in the study. The results show that in "both studies, nearly all respondents (97 %) reported using more than one cue to detect emotion, on the average 6–7 cues (range 1–13) from 4 different categories" (Planalp, DeFrancisco, and Rutherford 1996: 144–145). Moreover, the researchers found that "no two categories were more likely to occur together than any other" (Planalp 1998: 41). So again, no patterns of cues to any single emotion could be found. Instead, there are many cues of many different types that serve as indicators of emotions in everyday interaction. The signalling systems that were most often referred to by the participants were vocal cues, followed by facial cues and verbal expression. While vocal cues in most of the descriptions point at the general loudness, pitch level and speech rate of utterances, pointing at the arousal and dominance dimensions, the facial action reported (e.g. smiling, or furled eyebrows) is basically connected with the valence dimension (cf. Planalp, DeFrancisco, and Rutherford 1996: 146; Planalp 1998: 42). The results of this study (and of a similar one conducted by Averill [1982]) support the compositional approach to the expression and communication of emotional meaning. Characteristics of single signalling systems contribute components of meaning to an emotional state which can be attributed to people ob-

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served in a concrete situational and communicative context. The variable use of single cues to emotional meaning is explained by Planalp, DeFrancisco, and Rutherford (1996) in the following manner:

> Many cues have unclear interpretations and manifold causes. People scream, for example, because they are angry or because the stereo is too loud and they can't be heard unless they scream. People's faces turn red when they are embarrassed or when the furnace is running too high. People cry because they are sad or because their contact lenses are bothering them. Single, isolated cues to emotion may be very informative under controlled laboratory conditions, but they may be very misleading around the house. Multiple cues, on the other hand, may help observers to triangulate their data and come to a more solid, trustworthy interpretation. (Planalp, DeFrancisco, and Rutherford 1996: 151)

Considering the context in the perception and the analysis of emotions and emotion expression in the framework of the compositional approach promoted in this chapter allows for a clear differentiation of such variable use of cues that are potentially relevant for the communication of emotions.

7 Concluding remarks

Emotions have been introduced as complex phenomena experienced by individuals because of some emotion eliciting event. Next to specific feelings, emotional episodes include bodily reactions and motor expression making the individual's experience observable for others. Emotions are conceptualised and semantically described as multicomponential or multidimensional phenomena being specified by qualities on the dimensions (i) *novelty* or *(un)expectedness*, (ii) *valence*, (iii) *activation* or *arousal*, and (iv) *power* or *dominance*. This leads to a considerable semantic overlap even between the so-called basic emotions, which are considered to represent discrete categories of emotions. As regards the prosodic or vocal expression of emotions, researchers have spent much effort on proving this discreteness. However, to date, these efforts have not lead to convincing results. Even in the case of affect bursts no prosodic or vocal patterns of basic emotions could be found. Instead – again even for affect bursts – the results of numerous studies support the idea that prosodic or vocal emotion expression should also be conceptualised as multicomponential or multidimensional. Hence, prosodic and vocal characteristics are associated with emotional qualities of the aforementioned dimensions (or the similar components of the appraisal process). Together with expressive characteristics of other signalling systems in a specific context, the behaviour of an individual can be interpreted as expressing a specific emotion. This was introduced as the compositional approach to the expression or communication of emotions. Being strictly based on emotion perception in context, this approach has a number of advantages over the attempt to find patterns of emotion expression in isolated utterances. It does not only allow accounting for cultural differences in the appraisal of emotion eliciting events but also for cultural and individual differences in emotion expression. At the same time this approach supports the aforementioned scepticism in emotions being discrete phenomena.

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Ulrike Lüdtke, Hanna Ehlert, and Juan Bornman

37 Oral text production, oral text reception, and emotions

1 Paradigmatic overview on the history of research methodology in the field of emotions in oral communication
2 The historical (pure reasoning) approach
3 The cognitivist (and individual) approach
4 The relational (and experimental) approach
5 The in vivo (and participatory) approach
6 The digital (and automated) mass data approach
7 Giving it back to where it's from: the (con)text
8 References

Abstract: Even though the relationship between language and emotion has not been a mainstream research area in linguistics and neighbouring disciplines, there has always been a genuine, growing interest to understand the always complex, sometimes mysterious and mostly hidden interplay between these two interwoven constructs. The 21st century brought about the so-called emotional turn with keen interest in this topic and an explosion in the amount of published topics on the one hand, but with little systematization of how they are studied on the other. Therefore, this chapter attempts to provide some structure to this multifaceted research area on emotions in the reception and production of oral texts – less by looking at the results but rather by highlighting the research methodology that brought about these results. This is done by applying a historiographic perspective and sketching a paradigmatic overview from ancient times until now. This will be illustrated by drawing on examples from other researchers as well as from our own laboratory for relational communication research. This chapter will conclude with an introduction of our own automated mass data methodology for the growing era of digitalization: TALC.

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1 Paradigmatic overview on the history of research methodology in the field of emotions in oral communication

1.1 The chicken or the egg? The interdependence of theoretical and methodological paradigms

The 21st century brought about the so-called emotional turn (Lüdtke 2015) with keen interest in studying the relationship between language and emotion. Evidence for this is seen by the explosion of published research on the topic (Damásio 1994, 2000; Foolen 1997, 2004; LeDoux 2000; Schwarz-Friesel 2007, 2008). Therefore, in an attempt to provide some structure to this multifaceted research area that focuses primarily on emotions in the reception and production of oral texts, we will not emphasize the results of this research, but rather highlight the research methodology that brought them about (Lüdtke and Polzin 2015). This focus is needed, as the research methodology has typically been neglected as far as this topic is concerned.

The first challenge we face in unpacking this topic is the classic chicken or the egg causality dilemma as it is difficult to say what comes first: a specific research method or a specific research question with the theoretical constructs linked to it? If we consider some prominent examples on the topic, it would appear as if the causality dilemma can be argued either way. On the one hand, major theoretical shifts or findings did result in new research methods, e.g., the turn from a diachronic (taking history into account) towards a synchronic (without taking history into account) perspective in studying oral language production, or the detection of mirror neurons and their role in studying language development. On the other hand, new inventions and innovative technology influenced or possibly even opened up new research areas, e.g., using imaging techniques such as fMRI (functional magnetic resonance imaging) to understand the role of emotions in word memory or in bilingual language reception and production, or the latest findings in machine learning and neural networks in designing software for (semi)automated speech transcription and analysis detecting e.g., emotion denotating vocabulary.

To explore the causal link between theory and research methodology in more depth, this chapter takes a historiographic perspective drawing on Thomas Kuhn's (1970) scientific theory to provide an overview from ancient times until now.

1.2 From Logos to Dialogue: trajectories towards a relational and digital paradigm

In general we can summarize that on a theoretical level the different disciplines that study the reception and production of oral texts (e.g., language philosophy, linguistics and semiotics) have moved from an individualistic, rationalistic and emotion-denying paradigm, called 'Logos', towards a paradigm that integrates context and emotion in multimodal communication called 'Dialogue' (drawing on Bakhtin's [1986] notion), over the last 2,500

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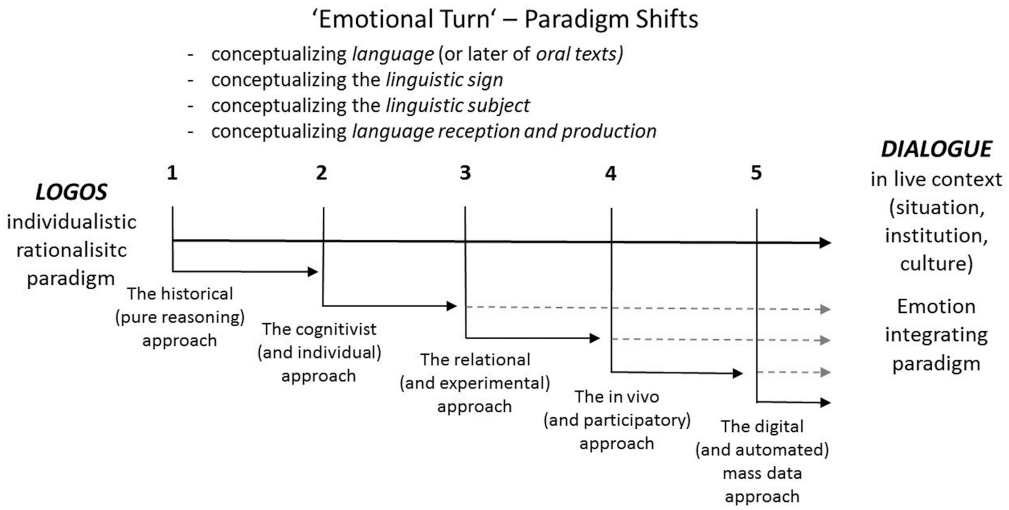

Fig. 37.1: From Logos to Dialogue: trajectories towards an emotion-integrating methodological research paradigm.

years. To our understanding, this conceptual trajectory can be briefly described as consisting of five major paradigms as shown in Figure 37.1. Four of these paradigms continue in the present as can be seen by recent publications. In all sections, only the first historical emotion-excluding paradigm has been overcome.

Within this transdisciplinary journey from Logos to Dialogue (see Figure 37.1) lies a deeper inner structure that connects all the methodological approaches. Therefore, these approaches can be described as containing different yet interrelated concepts:

- conceptualizing *language* (or later, *oral texts)*: from a mental monologue towards an intersubjective corporeal dialogue;
- conceptualizing the *linguistic sign*: from emotion-free symbols towards emotionally marked multimodal codes;
- conceptualizing the *linguistic subject*: from the ahistorical object towards the historical subject-in-process; and
- conceptualizing *language reception and production*: from purely cognitive towards emotionally influenced processing.

The five major approaches sketched above, as well as the major paradigmatic changes in how they are conceptualized, is described in detail in the following sections. Table 37.1 gives an overview of the methodological advancements and limitations of each approach as well as the transitions between them.

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Tab. 37.1: Methodological advancements and limitations of different research paradigms in studying oral text production, oral text reception, and emotions.

Approach	Methodological advancements	Methodological limitations
1 The historical (pure reasoning) approach	• Epistemology is established as pure reasoning • Language as 'logos' is pure thought and reason	• Language as 'mythos', 'pathos' and 'ethos' is non-scientific • Emotions are strictly excluded from research
⬇	*Transition: Emotion becomes research worthy in cognitive science*	
2 The cognitivist (and individual) approach	• Emotion as a separate domain of the individual is accepted as a subject of research in cognitive linguistics • Clinical standardization guarantees objective, valid and reliable results of empirically measuring the interplay of emotion and language	• Focusses only on emotion as cognitive processes / emotional aspects within the language development of the individual child • Methodology becomes increasingly experimental and context controlling • Emotionally important communication partner(s), narratives and context are excluded
⬇	*Transition: Recognition of the communicative dyad as space for emotional regulation of language and communication*	
3 The relational (and experimental) approach	• The communicative dyad and its shared narratives are included into the analysis of emotion in oral texts • Multimodal data on emotion in oral texts are collected	• Context beyond the dyad is still excluded • Sample size is very limited due to refined data collection and detailed (micro-)analysis • Sequences analysed are often restricted to minutes or even shorter periods of time
⬇	*Transition: Research of emotion in oral texts demands participation of all parties involved in the research process in natural contexts*	
4 The in vivo (and participatory) approach	• Contextual influences are included into the research of emotion in oral texts • Complex data are collected in natural settings, everybody in the research field decides about all steps of the research process (e.g. which language data are collected when and how)	• Sample size is still limited due to detailed analysis • Subjective bias may have impact on results
⬇	*Transition: Deepening of qualitative advancements of previous approaches by quantitative technological developments*	
5 The digital (and automated) mass data approach	• Multimodal data can be collected in real life contexts • Emotions are objectively analysed in oral texts over longer time sequences in natural settings • Existing results regarding emotions in oral texts (e.g. development) can be verified and deepened via mass data	• Technology for the transcription and analysis of natural contexts is still in development

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2 The historical (pure reasoning) approach

In this classical approach, Logos (as the emotion-denying paradigm mentioned in Section 1.2) is primarily concerned with the intersection of language, truth and reason. This discussion starts by describing how Logos was understood in ancient Greece as pure reasoning, followed by the period of Enlightenment – not leaving behind phenomenology in the 20th century, which was one of the first emotion-including perspectives outside the mainstream.

2.1 'Logos' in ancient Greece

Western philosophy has, since its inception, assumed the inseparable link between language and reason when Heraclitus (6th century BC) introduced the concept of Logos into philosophical discourse. In this tradition, language (as Logos) was regarded as a model for the world, an avenue to pure reason, logical understanding and truth. Plato, for example, claimed that true belief with the addition of Logos is knowledge, while belief without Logos is not knowledge (Plato in *Politeia*, 380 BC).

From this viewpoint it becomes crystal clear that the leading Greek philosophers of the time did not regard emotion as worthy of study. In *Theaetetus* (first published in 398 BCE) the Greek philosopher Plato describes a dialogue between his teacher, Socrates, and a young Greek mathematician, Theaetetus, who attempted to devise a simple formula for knowledge. First they divided language into 'Logos' (which engages our intellect through the written word), 'Ethos' (which engages our sense of identifying what is credible), 'Pathos' (which engages our feelings), and 'Mythos' (which engages our sense of humanity and connection with others and with nature). Socrates and Theaetetus then concluded that knowledge is "true belief with an account" and equated Logos with "pure reason" while Pathos, Mythos and Ethos were subordinated (or even excluded) from true knowledge and science as emotion or belief driven.

This rationalistic paradigm was the ruling epistemological approach in the Western world for about two thousand years. However, although there had been manifold variations in different epochs, e.g., from Descartes' (1641) *Meditationes de prima philosophia*, with the famous quote "I think, therefore I am", to Locke's ([1690] 1975) *An essay on human understanding*, and Carnap's ([1928] 2003) *Der logische Aufbau der Welt* [The logical structure of the world], which is widely regarded as one of the most important books for the history of analytic philosophy, and finally Popper's ([1959] 2010) *Die Logik der Forschung* [The logic of scientific discovery], the human understanding was essentially seen as a pure cognitive activity. In this view, "ideal" language is "objective truth" which is the foundation of the Aristotelian logic of a reasoning scientist in his first-person-epistemological perspective – one that is neutral, objective, abstract and allegedly true. Therefore, in the West, emotions in language have long been regarded as a topic only in the non-mainstream areas of Rhetoric and Stylistic (as the art of composing texts), even though in non-monotheistic cultures, e.g., in the linguistics of Sanskrit, emotion-including conceptualizations such as the antagonistic play of 'dhvani' ('the articulated word') and 'sphota' ('the coding of meaning') have a 5,000-year-old tradition (see Kristeva 1989).

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2.2 Cognitivist conceptualizations as objective reflections of reality since Enlightenment

This rationalistic paradigm of pure thought and language continued to reign in Western philosophy and was emphasized especially by and since Enlightenment (an intellectual movement of the late 17th and 18th centuries in Europe that emphasized reason and individualism above tradition). In linguistics and semiotics, the negation of emotion as an important topic continued and was even underlined by the era of Structuralism with its cognitive emotion-free approach of understanding human phenomena by means of an abstract structure modelled on language (Lüdtke 2012). As a key feature, all linguistic conceptualizations of 'langage' (de Saussure 1916) are purely abstract and mental, being considered as objective emotion-free reflections of reality. For example, de Saussure's dyadic conceptualization of the sign as an arbitrary symbol consisted of the purely mental 'signifiant' ('signifier': e.g., concept of articulation) and the purely mental 'signifié' ('signified': concept of content) – excluding any material signifier (e.g., facial expressions) and even more excluding the materiality of existing objects of reference – including emotions – as in triadic sign concepts (depicting the relationship between signifier, signified and object of reference), e.g., from Peirce (Hartshorne and Weiss 1931). Not until the dawn of the theories of poststructuralism, discarding the ideas of structuralism (e.g., Derrida 1967), did these cognitivist abstract boundaries of the solipsistic mental monologue of signifier and signified, open up and invite real-life emotions and their impact on oral text production and reception into the interplay with cognition and epistemology (the science of gaining knowledge).

2.3 Introspection as a non-empirical tool in Phenomenology

In our attempt to provide a broad historical backdrop of how language and emotion had been studied, it would be responsible to briefly pause in the Phenomenology era, and consider the work done by classical phenomenologists such as Husserl ([1913] 1982) and Merleau-Ponty ([1945] 1965). As phenomenology aimed to study the nature of consciousness and one's interpretation and experience in one's lifeworld (which is in stark contrast to the Cartesian approach built on reasoning), it remained outside of mainstream social science for some period. Phenomenology advocated for a systematic reflection using epistemological means such as intuition and empathy – both deeply permeated by subjectivity and emotions. For the purpose of this chapter, it is thus evident that the phenomenological approach is critical in the study of language and emotion as it refines the old research method of introspection, the examination of one's own conscious thoughts and emotions (which has long been blamed as non-objective, non-empirical and therefore non-scientific) in a new and sophisticated way. The recent wave of US-based Neo-Phenomenologists (e.g., see von Bonsdorff 2015), who focus on the reflection of one's own emotion in the epistemological process, as well as on how intertwined language and emotion are, is gaining momentum. Hence, phenomenology (with introspection as a critical tool) is becoming more widely recognized and accepted as a scientific field of study.

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The historical (pure reasoning) approach established epistemology by separating emotion from science. Language was seen as the objective and emotion-free expression of pure thought and truth. An exception from this reasoning built approach are the phenomenologists who included the conscious reflection of one's own thoughts and emotions into their methodological repertoire.

3 The cognitivist (and individual) approach

While ancient philosophers strictly separated emotion from the realm of science, later researchers recognized them as research worthy in cognition. A big step into the research methodology of understanding the role of emotions in the reception and production of oral texts takes us to the more recent history of emotion research, as conducted in the discipline of psychology. Darwin's *The expression of the emotions in man and animals,* dated back to 1872, marked the acceptance of studying emotion into mainstream psychological research. It also marked the beginning of the use of ethological methodology – originally to study animal behaviour – for understanding the multimodal (verbal and non-verbal) communication of emotions. This work was continued by Wundt ([1900] 2007) and then intensified by Ekman's (1999) concept of *basic emotions*. The idea of identifying intra-individual emotions and studying their inter-individual communication and learning by employing behaviourist concepts such as imitation and enforcement, as well as investigating their cultural determinedness or independency, made the topic famous and well accepted. Slowly but surely ethological observation of the expression and communication of individual emotions under natural conditions changed into observation of elicited emotional behaviour in artificial experimental laboratory settings.

3.1 Cognitivism and cognitive (psycho)linguistics

A similar trajectory was seen in the discipline of linguistics. Emotion-in-language changed from a no-go zone, to one of the most researched areas in the social sciences. The classic idea of 'language as a mirror of the mind' (Chomsky 1968) – pure, without any cultural, social or affective influences – was challenged by cognitivist linguistics. These scholars accepted emotion as an important domain and counterpart for cognition, which implied that emotion could now be studied empirically. As a result, many cognitivist conceptualizations about language had to be reframed. For example, even long-standing neurolinguistic models of language processing, such as Levelt's (1989) model of language reception and production, which had been conceptualized according to modular computational models, were questioned. This stemmed from the fact that these models did not explain how affective parameters were influencing different language aspects such as word memory, word learning, and word production. Accordingly, research methodology slowly followed suit and moved into the individualistic experimental approach. Famous examples are, e.g., the experiments on affective priming (Klauer 1997), on word cueing (Fazio et al. 1986; Van

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Rensbergen, Storms, and De Deyne 2015) and even in patholinguistic studies (Berrin-Wasserman, Winnick, and Borod 2003).

3.2 Motherese and Internal State Language: from observation towards elicitation

This idea of studying the interplay of emotion, cognition and language by empirical means led to psycholinguistic research on the acquisition and use of Internal State Language (ISL), forming a large and significant body of knowledge closely linked to the ability to understand the mental states of others, the so-called 'Theory of Mind' (ToM) (Wellman and Lagattuta 2000). Looking at the vast field of psycholinguistic research which, at that time, was grappling to understand this interplay and drawing on the distinction of the expressive (*Ausdruck*), the representational (*Darstellung*) and the conative function (*Appell*) in the Organon model (a model of linguistic signification in natural languages) formulated by Bühler ([1934] 2011) as well as considering Konstantinidou's (1997) differentiation between the emotive (language as indirect means of expressing or evoking emotions) and the emotional mode (language as direct means of denoting emotions) of linguistic emotion representation (Lüdtke 2006, 2012), two major areas emerged. On one hand the research focused on motherese or child-directed speech (CDS)/infant-directed speech (IDS) in which emotion is mostly indirectly represented in the mother's or caretaker's speech, e.g., by alliteration and vowel stretching on the phonetic level or rhyming and abbreviations on the morphological level (Saint-Georges et al. 2013). The importance of the affective aspects of typical CDS/IDS in association with infant pre-linguistic and linguistic outcomes were recognized (Spinelli, Fasolo, and Mesman 2017). On the other hand, the research focused on the oral language production of the child where he or she denoted his or her internal states in verbal interactions with caretakers or peers directly. This was aimed at detecting the rules and milestones of linguistic development as well as of cognitive growth, e.g., the growing understanding of the mental and emotional states of the communication partners, of which the oral text production was seen as a reflection. Early basic studies found that the lexical stages of acquiring emotion denoting words in young children between 18 to 36 months start from describing their inner physiological states or wellbeing, followed by the ability to label affect, towards finally reflecting on moral states (Klann-Delius and Kauschke 1996). It was also reported that young children undergo a functional trajectory from first denoting the emotions of themselves and then of others, followed by talking about their emotions in the past and then in the future, and thereafter by talking about the causes and results of emotions, towards referring to emotions verbally in order to change the emotional state of the communication partner, and finally to pretending emotions in play (Klann-Delius 2015). More recent studies started focusing on investigating the acquisition and use of internal state language in certain populations, e.g., focusing on children with Autism Spectrum Disorders (Levy and Kauschke 2015; Kauschke, van der Beek, and Kamp-Becker 2016).

Looking at the psycholinguistic methodology which was used for this research on internal state language, it becomes clear that the application of different empirical methods during the last decades reflect exactly the above-described trajectory of methodology in

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the discipline of psychology: From ethological observation in natural contexts to data collection of elicited behaviour in increasingly artificial and experimental settings either in the child's home or in educational institutions or even in a university laboratory. For example, many studies – including the ground-breaking work of Bretherton and Beeghly (1982), *Talking about internal states: the acquisition of an explicit theory of mind* – gathered ethological-observational data by relying on the maternal or parental report of children's internal state language at home (see also Carlson, Mandell, and Williams 2004; Kristen et al. 2012). As pure observation, transcription and coding of spontaneous mother-child communication are extremely time consuming because these natural interactions are not focused on the use of internal state language, data collection increasingly aimed to reduce this complexity by "designing" the language environment through the use of elicitation tasks. These elicitation tasks are not only aimed at a more economic collection of internal state language production, but also more economic data processing later on. Examples for eliciting methods of internal state language are, e.g., play with specific toys (Derscheid 1995) or the classical picture-book story tell or retell task (LaBounty et al. 2008; Siller et al. 2014) or "describing a best friend" task (Grazzani and Ornaghi 2012; Meins et al. 2006). Some researchers even use designs based on experiments in the laboratory context (Chiarella et al. 2013; Olineck and Poulin-Dubois 2009).

It is critical to highlight that by using this more artificial way of verbal data elicitation, the natural context of emotions in the reception and production of oral texts is lost. Even if a more focused and economic way of data production and processing is the aim, the number of children and the duration of recorded speech are still relatively small in these studies, mostly ranging from 20 to 120 children. This therefore begs the question: Is elicitation the ideal way in quantitative research methodology?

3.3 The impact of emotional factors on word learning: experimental studies using eye-tracking

In 2009 a new laboratory was started at Leibniz University Hannover to foster interdisciplinary research on the interplay of cognitive and emotional factors in language acquisition. The first laboratory study adopted the preferential looking paradigm (Aslin 2007; Lidz, Waxman, and Freedman 2003) to analyse the impact of affective properties of both verbal and non-verbal input on word learning and word memory (nouns and verbs) in 18–36-month-old German-speaking children (Leischner et al. 2013). An experimental design was created in which a child was seated on his/her mother's lap in a dark room, looking at two video screens that were placed side-by-side, showing short video clips. In these videos, an actor demonstrated certain activities linked to a specific verb with different emotional facial expressions. Using eye tracking, the direction and duration of the child's gaze on each screen was measured (see Figure 37.2). Eye tracking measures the point of gaze by directing near-infrared light towards the centre of the eyes, causing detectable reflections. The patterns of these reflections are then tracked by an infrared camera.

This research is an example of applying a standardized quantitative design within the cognitive empirical approach. However, the artificial experimental laboratory design was

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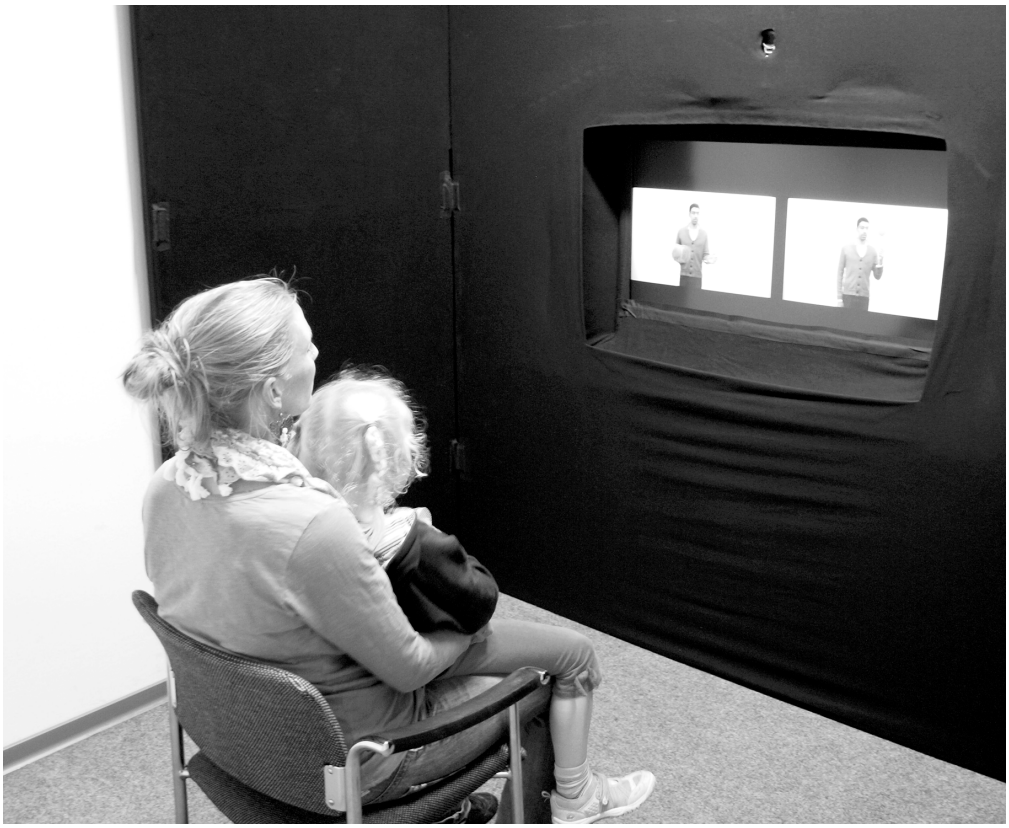

Fig. 37.2: Eye tracking study at the BabyLab Hannover following the cognitivist and individual approach.

soon questioned because it became evident that the contradiction of studying emotion in language learning in the laboratory was excluding everything a natural language-learning situation was made of. For example, the "clinical" design in itself did not reflect the interactional and contextual parameters of a natural context. Furthermore, the setting of acquiring words and their meaning from a video screen, without being embedded in joint attention and human interaction and without a shared emotionally coloured narrative, was denying basic knowledge about language learning. The use of an actor displaying "fake" emotions on command was also not as convincing to the child as the emotions of a real person who the child is relating to. The assumption that a face could display an emotionally "neutral" expression besides "positive" or "negative" ones, was simply not working. Moreover, the classical psycholinguistic test tradition of using artificial words ignored the fact that not all lexical signifiers (e.g., words) are arbitrary but that they might have some iconic or indexical (either resembling the signified or being caused by it) links to their referring objects or actions as they are genuinely rooted in emotionally marked multimodal codes (Lüdtke 2006, 2012). And last but not least, it denied the conceptualization of the learning child being a holistic subject-in-process embedded in context and history and instead continued to view it in the Cartesian tradition of an ahistoric object that could be studied without connection to its surroundings or past (Lüdtke [2012] referring to Kristeva [1998]).

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The cognitivist (and individual) approach produces evidence about the importance of affective aspects in fostering language development (motherese/CDS/IDS) and the development of emotional expressiveness and internal state language in children in mostly controlled or even purely experimental settings. It focuses on the individual child and its cognitive developmental outcomes and lacks research or observations in interactive, natural contexts.

4 The relational (and experimental) approach

While research on emotion in oral text had only a limited focus on the child and its cognitive processes, the next approach gave rise to the birth of the communicative dyad. First the concept of intersubjectivity and relational emotions will be discussed, which methodologically enabled the rise of microanalysis of the mother-child dyad, followed by a description of how the distortion of emotion regulation and virtual self-other representation play out in dyadic interactions.

4.1 Intersubjectivity and relational emotions: microanalysis of the communicative dyad

In our walk through the history of research methodology in studying the role of emotions in the reception and production of oral texts, we now arrive at a new paradigm, which is marked by the birth of the communicative dyad. This implies a move away from the cognitivist paradigm and the narrow focus on the individual, to a recognition that language reception and production always take place between at least two communication partners and that it is motivated, fuelled, and processed by multi-layered emotional regulation (Lüdtke 2012). What is still in place is the Cartesian epistemology as this approach is still based on the analysis of these regulatory processes by objective empirical means. They even become more and more sophisticated, working primarily in experimental lab settings refining the methods with a micro-analytic approach.

Paving the way for this new paradigm was done in linguistics by the pragmatic turn (see Bernstein 2010) and especially by Speech Act Theory (assuming that the smallest unit of human communication is not a sentence or other expression, but rather the performance of certain kinds of communicative acts like asking questions, explaining or thanking) (Austin 1962; Searle [1969] 2012), as well as in developmental psychology and psycholinguistics by the interactionist turn (Bruner 1983, 1990). For this chapter, the rise of the Infant Intersubjectivity Theory (Trevarthen 1979, 1998, 2001) is important, as it is this theory that foregrounds the role of emotions for interpersonal generation of meaning and the communicative signing process (semiosis), therefore going much further than only focusing on joint attention in mother-child interaction (Bruner 1983, 1990) or on attachment (Bowlby 1978). Basic paradigmatic assumptions are that not only Ekman's basic individual emotions (see Section 2.4.) are important for communication and language development, but also the so-called relational emotions which are tied to another person such as pride, shame and show-

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ing off. Meaning consists not of a mapping between signifier and signified (see Section 2.2.) but in intersubjective co-construction embedded in emotionally coloured narratives (Lüdtke 2012). Communicative signs exchanged within the narrative dyad are not arbitrary symbols but emotionally marked in all three constituents (meaning, form and reference objects) and therefore iconic and/or indexical as well (Peirce in Hartshorne, Charles, and Paul Weiss 1931; Lüdtke 2012). Language acquisition is not to be isolated and reduced to the linguistic realm but should be regarded as intersemiotic (verbal and non-verbal), because it is grounded in a multimodal sign continuum.

The intersubjectivity approach was in tune with the latest neuropsychophysiological findings even long before the neuroscientific protagonists of the emotional turn such as LeDoux (1998, 2000) and Damásio (1994, 2000) or the detection of the mirror neurons by Rizzolatti and Gallese (Rizzolatti et al. 1996; Rizzolatti and Arbib 1998; Stamenov and Gallese 2002; Rizzolatti and Craighero 2004). Trevarthen et al. (2001) not only pointed out that emotions and especially relational emotions influence the morphogenesis of the child's brain growth and functional differentiation, but that more and more complex motivational systems regulate communication and language development both in reception and production.

On the level of research methodology, this paradigmatic turn initiated a revolution: as the emotional regulation within the dyad and the in-between became the epistemological subject, methods had to be found to study them. At first, the experimental laboratory was selected and experiments were designed to analyse mother-child interaction. A very classic example of this approach is the famous design of Trevarthen (1979). In his Infant Communication Laboratory at the University of Edinburgh a mirror was installed in a way parallel to the baby's face so that important core processes of imitation, mirroring, provocation and other emotionally regulated processes within proto-conversation (interaction between an adult and a baby before the onset of language in the child) could clearly be analysed (see Figure 37.3). Data collection still worked as usual by audio- and videotaping, but data analysis became increasingly sophisticated with the inclusion of microanalysis of voice, gaze, mimics and other semiotic parameters as emotional impact evolved (see Figure 37.3). Especially the aspect of musicality, such as expressive timing and interactional synchrony, and other parameters received attention (Leclère et al. 2014). Later, this type of classic microanalytic methodology found its way out of the laboratory into manifold experimental settings, e.g., into neonate intensive care units (Stefana and Lavelli 2017) and onto different continents for cross-cultural comparisons (Keller et al. 2008).

4.2 Distortion of emotion regulation and virtual Self-Other representation: the Double TV Replay Method

These new research methodologies allowed not only for a deepening and refinement of investigation, but also for expanding the research focus on the distortion of emotion regulation processes in communicative dyads (see Figure 37.3). Again, the first experiments were conducted in university laboratories with the invention of experimental arrangements such as the classic Double Television Replay Method by Lynn Murray used in the 'Double

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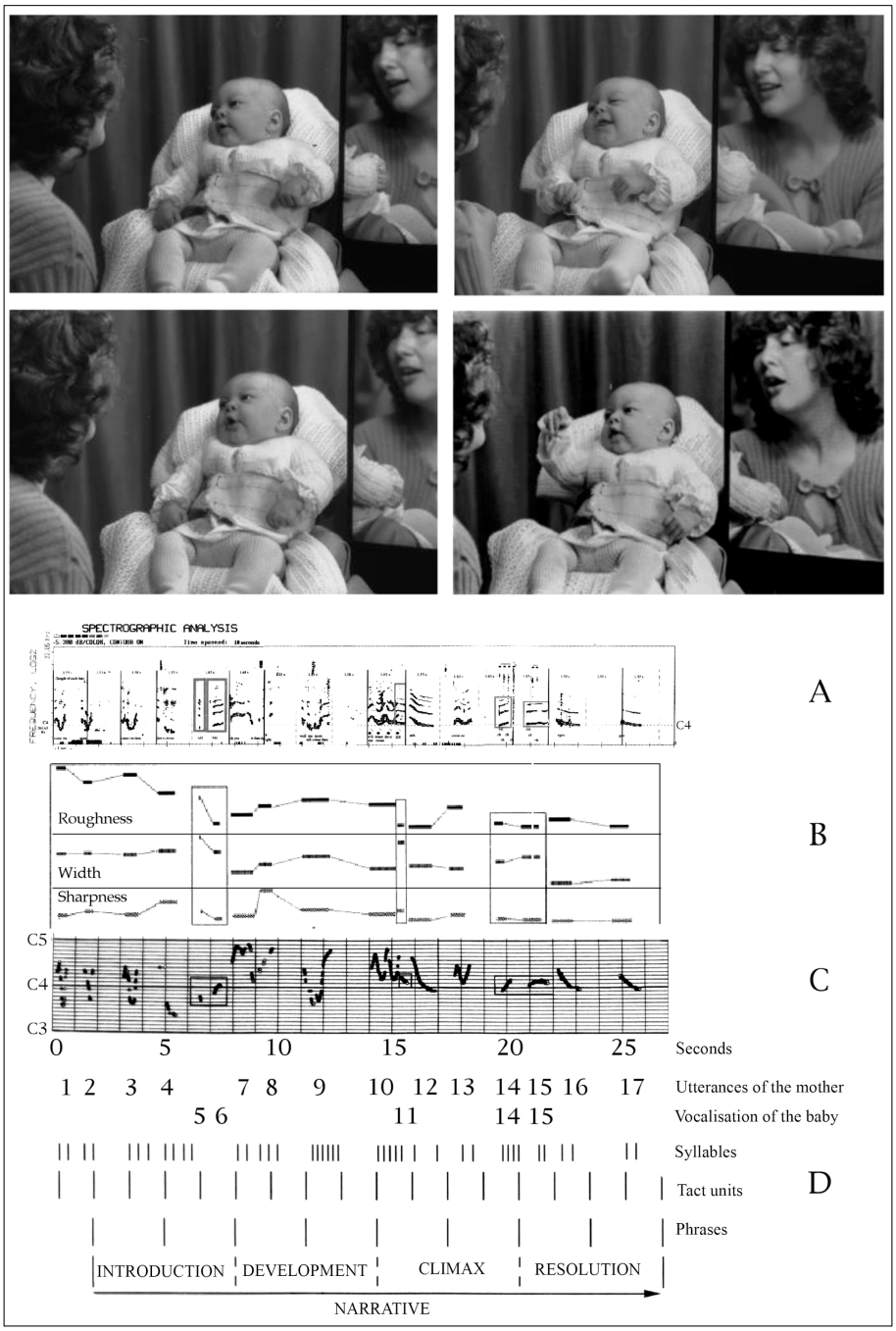

Fig. 37.3: Microanalysis of mother-infant communication following the relational and experimental approach. From top to bottom: video frames of mother and infant facial expressions and gestures in a mirror set up, spectrographic analysis of voice, pitch variations, utterances and vocalizations segmented in syllables, tact units, phrases and their narrative structures (Foolen, Lüdtke, and Schwarz-Friesel 2012, fig. 3; courtesy of Kohlhammer publ.).

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Television Intercom Experiment' (Murray and Trevarthen 1985; Nadel et al. 2001). This entailed that videotaped maternal responses were displayed to the baby with small delays (in seconds) to study the impact of this distortion of temporal emotional contingency on the baby's emotionally regulated communicative multimodal reactions, e.g., voice, gaze, hand movements, mimics. A similar experiment is the 'still or blank face', where the mother (or other social partner) interrupts the contingent flow of his/her expressions for a certain timespan during interaction with her child, displaying no emotional responsiveness (Adamson and Frick 2003; Cohn and Tronick 1983). Both experiments cause the child to withdraw from interaction, gaze away and show signs of disturbance and sadness. Later on, these distortions of emotionally regulated communicative processes were observed and analysed in dyads, where either the mother or the child presented an emotionally challenging communicative other – thereby influencing the representation of Virtual Other and Virtual Self (Bråten 2002). The Virtual Other and Virtual Self as trust-building mental reflections of the enacted self and other are crucial for the emotional regulation of the whole process of signification and communication, especially the co-construction of meaning (Lüdtke 2012, referring to Simonov 1991). These studies were conducted within settings in the clinical field of psychopathology, e.g., by studying mothers with borderline disorders or postnatal depression (Apter et al. 2012; Gratier et al. 2015), or by studying children with Autism Spectrum Disorders (Nadel and Han 2015; Trevarthen and Delafield-Butt 2013).

Soon methods of multimodal analysis became more and more sophisticated while parameters became more and more complex, including psychophysiological parameters of measuring emotion regulation such as heart rate (Nagy 2008), oxygen saturation (Filippa et al. 2013) or full body motion capture (Delafield-Butt and Trevarthen 2015) of the corporeal dialogue (involving the whole body) (Ruthrof 2000). Unfortunately, linguistic aspects became more and more neglected despite Trevarthen highlighting them since his earliest works on the origins of semiosis (see Trevarthen 1979, 1994, 2012, 2015). Meanwhile, the pragmatically influenced linguistic research on emotion in language became more sophisticated but remained in the time-consuming methodology of conversational analysis (Clift 2016; Schenkein 1978) or somehow became occupied with the refinement of imaging techniques on studying individual capacities or individual loss of language (Crosson et al. 2002; Landis 2006) within the neurolinguistics perspective.

Evidence of the relational (and experimental) approach shows the importance of intersubjective emotional regulation for positive cognitive and language development in micro-analytic settings focusing primarily on timing and rhythm. A variety of parameters is analysed in these studies including language, prosody, voice and psychophysiological parameters, while external influences on the intersubjective regulation of oral text production are still excluded.

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5 The in vivo (and participatory) approach

Stepping from relational and experimental approaches in studying emotions in language reception and production towards *in vivo* and *participatory* approaches marked quite a revolutionary turn in research epistemology and research methodology. On the one hand, it

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meant to embrace not only the dyad as the nucleus of emotional regulation but also contextual influences. On the other hand, it led to the conclusion that only by the participation of those involved in the research process would a complete insight of the topic be possible. In this section, we will first discuss the theoretical contribution that in vivo methods made to the field, after which we will describe the new tools that were needed to ensure this before revisiting the role of the researcher in the research process. We will illustrate these constructs practically by giving examples from studies undertaken by the Leibniz Lab for Relational Communication Research. First, the SMILE project (Speech and language development in different life situations [Lüdtke 2012 and 2015]) will briefly be described, followed by a Participation Action Research (PAR) study that was inspired by Video Interaction Guidance (VIG), conducted in an orphanage in Tanzania. We will conclude with a study that reanalysed the SMILE data in a qualitative design, making it applicable for counselling in emotionally challenging early childhood education and care (ECEC) contexts.

5.1 Researching emotions in vulnerable contexts

As research became more focused on understanding the interplay between emotion and language reception and production, *in vivo* (Latin for 'within the living') approaches came to the foreground and were now taken seriously. The communicative dyad was recognized for what it was, despite the uncomfortable methodological complexity that sometimes accompanied it. Social research freed itself from all artificial layers and confessed to collect data only in natural, real-life settings. The participatory approach finally said farewell to all rationalistic objectivism by embracing first a constructivist (von Foerster 1981; Maturana and Varela 1992) and then later a relational (Bourdieu [1994] 1998; Lüdtke 2012) epistemology. Main fundamentals of this epistemology are that there is no objective truth, only manifold conceptions of "reality", and that the researcher influences the field and therefore the results of research are influenced as soon as he or she enters it.

Methodological consequences of this revolutionary turn are plentiful. Firstly, by moving into the field, in vivo methods had to be invented which enable a flexible way of data collection which is adjustable even to the most challenging conditions. In our laboratory we attempted to address this aim by developing a camera system (Frank et al. 2013; Frank and Trevarthen 2015) that was mobile and light (to be carried by hand to remote places), robust (against adverse conditions in the field such as heat), and autonomous (with big external hard drives for huge data storage and huge batteries to be independent from power supply) (see Figure 37.4). This in vivo research tool expanded typical data collection contexts (e.g., home, clinic or kindergarten context) to new possibilities, such as conducting research in remote and/or highly vulnerable contexts such as orphanages in rural Tanzania.

Secondly, a ground-breaking epistemological consequence was that the researcher had to totally withdraw from the field, and that the research participants were to be taken seriously as being the owner of their research and that they had the power to make decisions in all phases of the research process. This means that research participants can decide if and with what kind of research question they wanted to study themselves, which

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Fig. 37.4: Mobile, robust and autonomous multi-camera system for the in vivo and participatory approach (Frank and Trevarthen 2012; courtesy of Dr. Bodo Frank).

material and methods to use, when, where, what, how and how long to collect data, and how to be part of the data analysis process and – often forgotten – how, where and with whom to share and publish and discuss the results. Even if this ideal constructivist approach might be difficult to realize on all levels and at all times, it inspired and guided the Participatory Action Research (PAR) (McIntyre 2008) and Disability Studies (Johnstone 2001) approaches followed in the Laboratory for Relational Communication Research at the Leibniz University Hannover. This laboratory therefore is constantly trying to refine its research tools to be non-intrusive (e.g., by using very small cameras that can easily be hidden) and easy to operate (e.g., allowing children or caretakers to independently start and stop the recording process on their own, irrespective of their educational or literacy levels) (see Figure 37.4).

The first study in the Leibniz Lab for Relational Communication Research using the in vivo methodology and the multi-camera system was realized within the SMILE project (Bansner 2017; Bansner and Lüdtke 2014; Lück 2019). The aim of project SMILE was to conduct a micro-analysis of the impact of low socioeconomic background on the interplay of emotion regulation and communication processes within the mother-child dyad, in order to further develop Trevarthen's (1998) classical laboratory and Gratier's (2003) clinical design work. Gratier (2003) conducted a cross-cultural comparison and investigated the influence of immigration on interactional synchrony in mother-infant dyads from India, France

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Fig. 37.5: Multi-camera system working autonomically for in vivo data collection in intimate or vulnerable contexts (Frank et al. 2013), here nappy changing at home (Bansner 2017, fig. 8; Lück 2019, fig. 3; courtesy of Springer VS).

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and the US during home visits. Bansner (2017) not only collected in vivo recordings within the natural home environment, but the study was also non-intrusive as the mother and child were not disturbed during their communication in their natural setting by the researcher. This was achieved by training the mothers to handle the recording system by themselves before data collection commenced (Bansner 2017; Lück 2019). The mothers were also empowered to decide independently when they started and stopped the recording process, as the very intimate situation of recording communication during nappy changing demanded it (see Figure 37.5). Unfortunately, involving the mothers in the process of data analysis and interpretation was not possible yet, as this was still done using traditional methods of transcribing, coding and doing correlational analysis in the laboratory.

5.2 Participatory Action Research in Tanzania

In this laboratory's next study (Establishing a Child Development Lab in Tanzania [Lüdtke 2012–2015]), the approach turned more towards Participatory Action Research (PAR) (McIntyre 2008). It continued to use the multi-camera system for in vivo data collection, but it was accompanied by a handycam recording, inspired by the Video Interaction Guidance (VIG) (Kennedy, Landor, and Todd 2011) approach (see Figure 37.6). The study was conducted within a small orphanage in rural Tanzania and aimed to understand the interplay of delays or disorders in emotional and communicative development in young orphans (Frank et al. 2013; Polzin et al. 2017; Polzin 2019; Schütte 2016, 2018). It also attempted to train the caregivers in emotionally supporting communication and language development in these children. Besides achieving autonomous in vivo data collection in a vulnerable context, this study highlighted the character of co-construction of the epistemological process in all phases of the research. For example, before the initiation of the study, the institution expressed a need to understand challenging communicative emotional behaviour of some children as well as the need for training emotional and communicative competence of the caretaker students (Schütte 2016, 2018). This study also expanded the research focus from the communicative caretaker-child dyad towards the impact of not only the educational institution on it but even of the culture(s) within this creolized institution (Polzin 2019). An excellent example of this move towards a constructivist (or even relational) epistemology is the joint video analysis by German and African PhD students with the director of the orphanage and orphanage caretaker students. This approach allowed for a deeper understanding of cultural traces within the multimodal musicality of voice, oral text production, and hands and body movements within the caretaker-child communication (see Figure 37.7).

5.3 Relational single-case studies

Researchers at this laboratory are quite satisfied with their progress in terms of developing participatory methods for data collection but are attempting to refine their joint data analysis in order to develop more systematic protocols of relational epistemological methods. In

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Fig. 37.6: Training orphanage caretaker students in Tanzania to operate the handycam, inspired by the participatory Video Interaction Guidance (VIG) approach (courtesy of Dr. Ulrike Schütte).

an attempt to address this concern, Senta Lück (2019) reanalysed the SMILE data in a strict qualitative way by proposing the method of 'Relational single-case study' (*Relationale Fallanalyse*) for educational counselling in the ECEC context. Her work is innovative as she is taking the observer's emotions into account – addressing a relic of the objectivist past era – and attempting to make it usable for understanding co-construction of joint meaning in the educational analysis of understanding mother-child communication, e.g., helping mothers to develop emotionally and verbally contingent maternal responses to the oral text production of the baby.

The in vivo (and participatory) approach provides evidence that contextual factors such as migration, challenging life world situations, or institutional settings can influence the intersubjective emotional regulation in interaction expressed in oral text. With influential aspects becoming more and more multilayered, the people in the field must be heard to gain complete understanding of the manifold interfaces and dependencies. These elaborate analyses are bound to single-case studies or small sample sizes.

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Fig. 37.7: Joint analysis of the videos recorded by orphanage caretaker students (Polzin 2019, fig. 26; courtesy of Springer VS).

6 The digital (and automated) mass data approach

Finally, we discuss the contemporary digital mass data approach, which is typically automated. The transition here regards the deepening of qualitative advancements of previous approaches by quantitative technological developments. While each approach made its contributions to researching emotion in oral texts (see Table 37.1), the possibilities are expanded with this last introduced approach in terms of analysed periods of time in natural contexts, sample size, amount of data combining different parameters. After describing what led to this approach, we look at the tools that are currently available for data collection, transcription and analysis before concluding with a vision of "ideal" technology and the current development of TALC (Tools for Analyzing Language and Communication) in the Leibniz Lab for Relational Communication Research.

In contrast to the micro-analytic focus of the examples from the previous research approach, we zoom out when we step into the digital world. Digitalization opens up the research process to several new methodological possibilities regarding a macro-perspective on the topic of emotions in the reception and production of oral texts. Speech recognition

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technology made its first steps four decades ago and has evolved since to mainstream applications like Siri, Alexa or Dragon Speech (Huang, Baker, and Reddy 2014). The nowadays refined technology that incorporates machine learning also increases its appeal for linguistic research purposes.

Manually conducted research using classical methods such as natural speech and language samples is mostly restricted to small numbers (see Section 2.5), if analysis is to be thorough and detailed (VanDam et al. 2016). This is due to the enormous resource effort and labour that has to be put into the process of collecting, transcribing, annotating and analysing the data (MacWhinney and Fromm 2016). Supporting this process by including automation makes good economic sense: not only does it increase research sample sizes as it enables access to collecting and analysing mass data, it also allows for the inclusion of contextual parameters into the analysis. In the past, influential contextual aspects on language use and communication development in different environmental settings and especially influential emotional aspects had only been accessible via questionnaires or external observer ratings. For example, language use at home and in institutional settings differs in terms of affective quantity and quality (van Druten-Frietman et al. 2015); the emotional contingency of parental or caregiver input varies throughout socio-economic backgrounds (Merz et al. 2015); and media use or peer learning influence language-learning outcome due to their emotion regulation and "gluing" properties (Linebarger and Vaala 2010).

With suitable technological resources and innovative research methods, epistemological insights into the emotional dimension of oral text reception and production and language and communication development of linguistically and culturally diverse children and adults could also be better understood and fostered. The global lack of knowledge regarding these populations is well documented and in stark contrast to its growing importance over the last decades (Paradis and Govindarajan 2018). Another interesting option is the combination of speech and language data with other data of human expression. For example, by adding data of movement recognition technologies (facial or body, e.g., using inertial measurement units [IMU]), multimodal emotional reception and expression could be grasped more holistically. The multiplication and combination of aspects (larger sample sizes, more contextual variables, more linguistic variables and more languages) by this digitalized approach not only widens, deepens and completes the picture, but also offers a detailed look on the topic of emotions in oral texts and on every individual in his/her (developmental) environment. In this way, digitalization contributes via the macro perspective also to the micro perspective.

6.1 What technology is currently available? Exploring the state of the art

This section addresses technology targeting various aspects of oral texts in terms of data collection, transcription and analysis. Three software examples for linguistic analysis will be discussed: CLAN (Computerized Language ANalysis), SALT (Systematic Analysis of Language Transcripts) and LENA (Language ENvironment Analysis). Also features of partitur

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editors like those of ELAN (Eudico Linguistik Annotator), EXMARaLDA (Extensible Markup Language for Discourse Annotation), ANVIL (Annotation of Video and Spoken Language) and *Praat* (Dutch for 'spoken language') are outlined. These tools are more concerned with speech and prosodic aspects of oral texts and therefore often used in analysing the emotive dimension (see Figure 37.3).

6.1.1 Data collection

Apart from regular dictaphones or other recording devices on the market, a tool specifically designed to record and process natural language of adults and especially children is the LENA system (Greenwood et al. 2018). LENA was developed in 2006 by the non-profit LENA Foundation, originally to accelerate language development of young children by supporting caretakers to close home language opportunity gaps. Its hardware consists of a small, wearable recording device with a memory capacity of 16 hours (Richards et al. 2008).

6.1.2 Data transcription

Speech recognition has come a long way. Early applications were unable to determine the boundaries of words during continuous speech input. Speakers were forced to enunciate one word at a time, clearly separating each word by a short pause. The ability to process connected words was a big step for this technology (Juang and Rabiner 2004). The advances in machine learning and the rapidly growing availability of speech and text data led to significant improvements in speech recognition (Deng 2016). Today's systems are able to detect continuous speech using a vocabulary with a size of millions of words (Huang, Baker, and Reddy 2014). In limited settings they even exceed the accuracy of human listeners (Padmanabhan and Premkumar 2015). The recent approaches to automatic speech recognition use deep learning algorithms, which are enabled by the quickly increasing amount of available data. Adult corpora contain hundreds of hours of transcribed audio (Panayotov et al. 2015; Rousseau, Deléglise, and Esteve 2012). The performance of these models highly depends on the similarity between the speech they are applied to, and the speech of the dataset used during development of the models. Increasing the ability of the models to generalize to unseen conditions (e.g., different recording conditions, children's instead of adult's speech, spoken instead of read speech, different language) is a future research topic (Fainberg et al. 2016; Sun et al. 2017).

Many products are available for adult speech recognition, covering professional or private purposes. However, all of them have a programmed feature that makes them less suitable for linguistic analysis: Speech recognition uses a probabilistic approach to model acoustics and language (Huang, Baker, and Reddy 2014). As a result, the systems are biased to suggest words and word-sequences, which were common in the data used to train the system, and are unable to suggest unknown words, deviated words, neologisms or even non-word utterances. For the purpose of linguistic analysis like in the field of developmental language and especially its emotional dimensions in phenotext (surface layers) and

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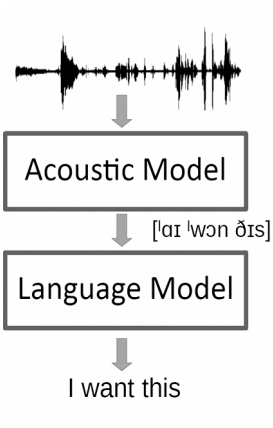

C1: I want this, (*loud*) this.
A: Ok, let's have a look at it.
C1: A wobo, a wobot. (*screams*) eeeeeh!
A: Do you know that?
C1: I do. It's it's it's it's a (pause) we have it in pweschool. (Re)memba when we went to the mall? (*whispers*) I saw one of those. In the toystore. They can go (*sound*) 'wwwwwoa' and 'blink blink' (re)memba?
A: Yes, I remember. You were very exited.
C1: Mum, can I have one, pleeease, pleeease mum!
A: I don't know if they still [*overlapping speech*: have them
C1: Pleeease, mum.]
A: What do you like about them?
C1: They have teeny-weeny stars on the head, they are so sheeny (*whispers*) [unintelligible utterance].
A: They are shiny?
C1: Yip.
A: (*laughs*) Ok.

Fig. 37.8: Speech recognition meets the reality of child language. TALC as a relational research methodology of communicative dyads and context factors for the digital and automated mass data approach.

genotext (conceptual structures), however, a transcription of utterances (non)word-for-(non)word is crucial since emotional content is transported not only by actual denoting words (as in ISL), but especially by how these words are combined, modified, shaped and uttered in oral texts. This means that the acoustic model is not the same as the language model (see Figure 37.8). A specific task for speech recognition is therefore the utterances of children. Their differences on the acoustic and linguistic level make automated processing challenging (see Figure 37.8). Children's (emotional) expression has not yet been forced into boundaries by adult protocol – they whisper, scream, laugh, vocalize and verbalize in much more expressive and emotionally marked ways than what adult speakers do.

Both linguistic analysis software like CLAN and SALT and partitur editors like EXMERaLDA only incorporate support for transcription or transcription editors that need to be fed with manual transcripts (MacWhinney 2000). The only tool available for research purposes including automatic speech recognition of child vocalizations as early as two months of age is LENA. The processing software is able to distinguish between child and adult speakers, male or female voices and natural language or language from electronic media based on the acoustic properties of the speech signal (e.g., distance to the target person wearing the device). Overlapping speech is also detected. LENA can process monolingual speech and has been validated for several languages including Vietnamese, Swedish and French (Canault et al. 2016; Ganek and Eriks-Brophy 2018; Schwarz et al. 2017). The cloud-based software processes the audio file into data about talk. This does not however include an automated transcript as an output of the program. Instead, analysis of the LENA software is based on internal estimations regarding the recorded communication, a so-called algorithmic transcription (Xu et al. 2008).

6.1.3 Data analysis

The Child Language Data Exchange System (CHILDES) was established in the 1980s and is an example of an early system to share computerized research data on language in social

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interactions globally (MacWhinney and Snow 1985). CHILDES was merged into the TalkBank repository collection (a large US-based repository dedicated to foster fundamental research in the study of human communication) in 1999, extending content to naturalistic recordings and transcripts of human communication in general (including gestures). All data in TalkBank repositories use a consistent XML-compatible representation format called CHAT (Codes for the Human Analysis of Transcripts), which facilitates automatic analysis and searching. These manually transcribed CHAT-format data can be analysed using the open-source program CLAN, which includes different program packages for specific populations or purposes. CLAN enables the user to link transcripts to media, send data to automatic acoustic analysis, and provides Jeffersonian transcription markings (a conversational analysis code). The analytic algorithms search for several strings and automatically compute several statistical or morphosyntactic features such as total number of words/utterances per speaker/second, type/token ratio (the total number of unique words divided by the total number of words), and number of repetitions (MacWhinney 2000; MacWhinney and Fromm 2016). Features of conversational analysis can be computed as well; for example, responsiveness of paired utterances of children and adults.

SALT software was also developed in the 1980s and processes language samples of one or more speakers (including children). Automated analysis focuses on morphemic, pragmatic, and semantic aspects of language and includes metrics like mean length of utterance (MLU), type/token ratio, or number of utterances per speaker turn. A second program allows users to implement their own analyses of the transcript (Miller et al. 1992; Weston, Shriberg, and Miller 1989). The prerequisite for this is to transcribe the data according to the standardized SALT transcription conventions. Reference databases allow comparison with typical child peers in monolingual English or Spanish and bilingual English/Spanish if the sample is elicited according to the SALT protocol (e.g., a picture-book task) and language development is the focus.

Analytic features of the LENA software output files are also written in standard XML format. The software automatically segments the audio data and provides different metrics on the natural language environment of children, mainly focused on percentile scores for adult words spoken to the target child, target child vocalizations and conversational turns (Xu et al. 2008). The so-called Automatic Vocalization Assessment (AVA™) algorithm also generates an expressive language developmental age and estimated mean length of utterance (EMLU) (Richards et al. 2008). The software does not evaluate qualitative linguistic factors, such as lexical diversity, communicative intent, or emotional valence (Greenwood et al. 2018). In contrast to other tools, the LENA output software has a very user-friendly reduced interface since it was originally developed for use with parents. For more detailed research purposes, the LENA Advanced Data Extractor (ADEX) gives access to the processed audio files and LENA software output files (LENA Foundation 2011).

So called partitur editors allow visual alignment of several aspects of communication e.g., gestures and speech. Software like ELAN, EXMARaLDA or ANVIL are professional tools for complex annotations of multimedia resources created on multiple hierarchically interconnected layers. Coding may be predefined or user-defined and is always time-aligned. Some of the programs also offer tools for corpora management (ELAN 2019; EXMARaLDA 2019; Kipp 2001). With the Praat program, phonetic, segmental, and prosodic features of

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speech can be displayed and analysed in detail. It includes, amongst others, features for speech analysis (e.g., spectral, formant, pitch, and intensity analysis) and labelling or segmentation of audio data (Boersma and Weenink 2018). These programs are able to visualize the multimodal expression of emotion in oral text through their layered setup.

6.2 What technology would we need? The vision of TALC

6.2.1 Data collection

Recording hardware should be as non-intrusive as possible with a memory capacity of several hours to collect natural speech and language samples in different settings at full length. The recording of extended time periods enables the analysis of the build-up of emotion in oral texts over longer narratives and across communicative situations in natural contexts. Non-intrusiveness is a core requirement (see Section 4) as the emotional dimension of oral text reception and production is often studied in vulnerable or marginalized populations, e.g., small children or persons with disabilities; further requirements are a high adjustability and applicability to sometimes extremely intimate natural settings, e.g., mother-child communication during nappy changing (Bansner 2017; Lück 2019), caretaker-child interaction after cochlear implant surgery, or caretaker-newborn conversation in a neonate unit. All recorded sound elements need to be synchronized as well.

6.2.2 Data transcription

A (non)word-for-(non)word phonetic transcription of adult and child speech in a variety of languages and language combinations would form the basis of the analysis. In addition, the application should be able to distinguish different sound sources (e.g., noise, electronic media, language), different speakers and different languages.

6.2.3 Data analysis

Data analysis should cover statistical parameters as well as automated annotation in different linguistic areas, e.g., internal state lexicon. Non-verbal elements like voice or prosodic features (e.g., intonation, stress, rhythm) and environmental sound sources should also be analysed as they give a lot of contextual insight into the emotional dimension of oral text production. The visualization of these different parameters (e.g., verbal, prosodic, body movement) should be time-aligned to be able to analyse their separate and combined contribution to the expression of emotion in oral text.

In 2018 the TALC (Tools for Analyzing Language and Communication) project commenced at the Leibniz Lab for Relational Communication Research at Leibniz University Hannover. The project aims to design a hard- and software system that records and (semi-) automatically transcribes, annotates and analyses samples from various speakers, lan-

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guages, and settings. Keeping in mind the history of changing methodological research paradigms described earlier in this chapter, the involvement of innovative technology does not mean a mere focus on quantifiable economic mass-data production. The TALC project aspires to empower researchers to access natural contexts in the reception and production of emotions in oral texts although the perspective is macro-analytic. Therefore, our focus lies on the development of an accurate (semi-)automated transcription software as a foundation for any further quantitative and especially qualitative analysis. If cultural, social, or individual affective parameters are to be analysed in oral texts, a transcript needs to reflect them. As explained throughout this chapter, this is not an easy task. Technological solutions for analysing speech and language are further developed than those for automated transcription of natural communication samples. Some of the most pressing challenges currently faced in the TALC project include:

- the identification of utterances from individual speakers;
- the recognition of child speech;
- the differentiation of different languages in one recording; and
- the processing of all acoustic sources in complex natural communication settings.

The software development requires carefully selected small steps combining the latest technologies in speech recognition with the power of machine learning. Therefore, it is unsurprising that an international multidisciplinary team approach is required, involving, amongst others, (computer) linguistics, information science, and speech and language pathology.

The digital (and automated) mass data approach holds the potential for completing the picture of emotion in oral text reception and production by combining the advancements of previous approaches: multimodal analysis with large sample sizes in natural observations. Verification of existing evidence on emotion in language development and exploration of the relationship of internal and external influences could be achieved.

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7 Giving it back to where it's from: the (con)text

We reflect on the history of research methodology in studying emotion in oral text reception and production by highlighting five major approaches and explaining their conceptual differences, starting with Descartes' (1641) "Cogito ergo sum" ['I think therefore I am'] and ending with Bourdieu's (1994) "The real is relational". Even though the epistemological and methodological trajectory will most likely continue in the years to come – maybe accelerated by ever faster and groundbreaking innovations in technology – we are convinced that one achievement should not be forgotten in the foreseeable avalanche of inventions: that research on emotion in oral texts always belongs to the 'speaking-subjects-in-process' (see Section 2.6.) (Lüdtke [2015] referring to Kristeva [1998]) in our globalized world. It belongs to each and every child around the world acquiring their first meaningful words, to the thousands of families migrating from one country to the next, losing and gaining

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their fragmented linguistic identities, to the many adults who struggle to re-learn the names of their loved ones after suffering a stroke.

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Helga Kotthoff

38 Emotion, oral art, and expression of grief

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2 Grieving in Georgia
3 Aesthetics in the lamentation for Dimiṭri Gabrielašvili
4 On the external structure of Georgian grief rituals
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Abstract: The communicative genre of lamentation is the focus of this article. Taking Georgian practices as examples, I will show how emotions of grief become feeling work that simultaneously combines poetic performance, gender politics, therapy and situated folk religious practices. The genre is still practiced in many parts of the world and shows the general human capacity to intensify and specify feelings, moods and dispositions. Situational standards of appropriateness develop in cultures. Lamentations are always sung in line structures with a certain melody. The procedure is carried out over several days. The poetry of the genre contributes to creating an extra-ordinary space, in which the living can experience contact with the dead (a core religious experience in the sense of A. Schütz (1962 [1945]). In aestheticization, the emotions of grief are worked out by the wailing women: but this oral art is not an end in itself here: it is deeply connected to a polytheistic folk religious space in which deceased are honoured and united with the living. Emotionality, oral poetry, gender, morality and visions of the hereafter are performatively linked.

1 Introduction

Everywhere in the world people feel a sense of loss, depression and helplessness when a close person dies. Grief finds expression, e.g., in a hunched posture, crying and sobbing and is displayed externally in this way. People mourn not only in isolation, but rather express their grief in their behaviour towards other people. Grief for the deceased thereby becomes a "total social phenomenon" (Mauss 1978: 17–18) suffered in community and performed for the community.

People manipulate their inner feelings in accord with cultural expectations — and then they in fact have them, as Hochschild (1983) has shown. In contemporary cultural anthropology, feelings are no longer regarded as something innate and inward, but rather as a culturally interwoven and shaped mode of experience (Abu-Lughod 1990; Lutz 1986; Lutz and White 1986). Furthermore, the external, conventionalized display of emotions varies historically and culturally. How things are said and done is as important in communicating

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emotions as what is said and done. Situational standards of appropriateness develop in cultures. The death of a person is everywhere an experience which evokes strong feelings. But historically and interculturally, expressions of these feelings are not the same (Metcalf and Huntington [1979] 1991; Stubbe 1985). Thus, for example, mourning in Georgia is richer in forms, is practiced for a longer period of time, and is more expressively communicated than in most Western European countries (Winkel 2002). In most parts of Georgia it is women who sing the improvised songs of grief (Kotthoff 1998, 2000).

1.1 Ritualization of grief

All societies ritualize grief to some degree, i.e., predictable activities with predictable sequences of actions have developed in which the affected persons participate obligatorily and yet voluntarily and competently. Various ritual theorists (Gluckman 1962; Goody 1961; Werlen 1984) have emphasized that rituals are non-instrumental to the extent that they are not useful for specifically technical purposes. They fulfil social functions instead, such as binding the group together, inspiring action and producing consensus. By expressive means they also alter the state of the world in a metaphysical sense, not in a physical sense (Leach 1976). In most societies "great transcendencies" (Luckmann 1967: 21, 42, 73) come into play when someone dies, and in this frame conceptions of the hereafter and images of transition are fictionalized. Not only the feeling of grief, but also imagined relationships with the deceased person and the other mourners can be staged.

In this article I point out that these conceptions of the hereafter not only exist in people's minds, but are actively performed, for example, in addressing the deceased, a practice often observed in Georgian lamentations (Kotthoff 1999a, 1999b, 2000; Nakašiʒe 1993). In rituals, symbolic condensation takes place, which is not confined to the verbal level. Sapir (1927) characterized the latter by multiple referents, richness of meaning, "a highly condensed form of substitute behavior for direct expression, allowing for the ready release of emotional tension" (Sapir 1927: 565), with "deeper roots in the unconscious and diffusing its emotional quality to types of behavior or situations apparently far removed from the original meaning of the symbol" (Sapir 1927: 566). I underline Sapir's claim, that in ritual the entire scenic arrangement is symbolically loaded and becomes the object of aesthetization. His idea of "release of emotional tension" (Sapir 1927: 567) has to be connected to that poetic performance as grief shapes not only the feelings of female lamenters, but also those of the onlookers. I regard oral poetry as closely connected with affect management (Finnegan 1977).

1.2 The semiotics of sadness

Ethologists and psychologists regard grief as one of the basic emotions (Ekman 1990) that are observable in all human beings and higher animals. But this does not mean that this emotion is self-evident. It is subject to a complex cultural performance process, which within a culture is comprehensible in all its shades. Feelings do not simply emanate from peo-

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ple, rather they are processed and transmitted by conventionalized procedures. Gendering is one step in this conventionalization: In many parts of the world women act out the feelings of sadness as lamenters (Seremetakis 1991). They are folk poets, textual and musical composers and singers of improvisations, as well as performers of a conversation with the dead.

Culture-transcending commonalities are apparent: Crying and a sunken body position function as icons and indices universally integrated into the expression of grief. A few authors (Feld 1982; Finnegan 1970; Urban 1988) point out that while the vocal and verbal styles of ritual keening and lamenting are interculturally different, they display common semiotic features and share in common certain resemblances with what we call "wailing" and "crying", and there are many icons and indices associated with bowing and being lowered into the ground: "As a semiotic device, wailing is linked to affect, just as at the core one assumes 'crying' as a formal device is linked to 'sadness'" (Urban 1988: 386).

As well in Georgia, cries of grief and appeals to the deceased are part and parcel of funeral rites. They are spoken or sung in lines (pulse units), using crying sounds, voice changes, drawn-out sighs, slowly falling intonation contours with integrated peaks, bowed bodily postures as well as an expressive lexicon.

Lamentations are a communicative genre that is not widespread in Europe, but is practiced e.g., in some parts of Greece (Danforth and Tsiaras 1982; Seremetakis 1991), in Serbia, Southern Italy (de Martino 2010), Corsica (Rosenberg 2004) and rural Finnland (Ahtone 2017).

In rituals the special manner of performance is more important than the content, which is detached from an instrumental means-end relation (Werlen 1984). Many rituals are characterized by stylistic elaborations and an emphasis on aesthetic means. Rituals cannot be understood without attention to style, symbol, and aesthetics — they are essential to them.

1.3 Artistry and religiosity

Schütz ([1945] 1962) and Luckmann (1967) see the capacity to transcend as the very heart of religiosity. Lamentation is not bound to a specific church but is found in dominantly Christian cultures such as Georgia or Greece as well as in Islamic cultures such as Bangladesh (Wilce 2009) or Azerbaijan (Goluboff 2008) or Egypt (Abu-Lughod 2002). As a practice outside the official church it is highly compatible with Luckmann's (1967) concept of the religious symbolic universe since it creates a "sacred cosmos" of the living united with the dead. Religion is taken to refer to that particular part of human existence which is concerned with the supernatural, with the ultimate meaning of life, with transcendence (Knoblauch 1999).

In this article I would like to show that the verbal art of lamenting should thus be seen as a situated folk religious practice outside of official churches, in which artistry contributes to creating an extraordinary space, in which the living can experience contact with the dead.

In the aesthetization of grief, emotions are worked out by individuals in representation of a social group (e.g., the village); this aesthetic is not an end in itself; it is deeply connect-

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ed to morality and folk religious experience. The special language that is used and the ways of speaking contextualize an extraordinary, religious space. Emotionality, art, morality and religiosity are performatively linked.

1.4 Lamentation research

Lamentation is well known from ancient times. For example, Homer represents various forms of ritual wailing (Dunham 2014), e.g., Aeschylus (Smyth 1926) and Euripides (Oates and O'Neill 1938) as well as the Old Testament (Greenstein 2010).

Much as in Africa (Finnegan 1970, 1977), Brazil (Urban 1988), Russia (Sokolov 1950), Papua New Guinea (Feld 1990), the Trobriand Islands (Senft 1985), Greece (Caraveli 1986; Seremetakis 1991) and wherever lamentation is still practiced, in Georgia it consists of improvised, partly sung, partly spoken collaborative polylogues, praising and addressing the deceased person (also accusing him/her of leaving the world), other deceased and those present, and voicing personal memories, thereby creating a shared memory and situating immediate emotions. The dirges are usually presented in line form, often with a repetitive melody and sobbing sounds at the line's end (Azik'uri 2002). Women are the chief wailers in West Georgia; in East Georgia only women lament. This emotional division of labor between the sexes is found in many cultures; it is always accompanied by an ideology which declares it as "natural": Women supposedly cry better and as givers of life are said to have better access to its termination.

Crying or sobbing sounds and appeals to the deceased are mostly arranged in lines, often in similar positions at the line's beginning or end; by virtue of their conventionalized positions they belong to the process of aesthetization. Certain formulae of taking over others' pain to oneself (Boeder 1988) appear frequently (Cocanidze 1993). Formulae and stable motifs (such as poetic rhetorical questions to the deceased as to why he had to leave) are combined in the *xmit naṭirlebi* (this genre name means literally 'crying loudly with one's voice') with improvisation, as is typical of oral art (Edwards and Sienkewicz 1990; Ong 1982). Each lament is in part individually tailored for the deceased person or to bystanders, since it contains biographical specifics which the lamenter can choose and stylize. Although there are generic standards of lament performance, the lamenter is free in choice of topic and development, in imagery, in telling stories, commenting upon or echoing previous texts. It is also up to her whether she sings or speaks her lines. There are no standards for turn length. Some turns may consist just of a formula, some may contain nothing more than some meaningless vowels, some contain a story that praises one of the present co-lamenters.

2 Grieving in Georgia

Georgia is a small country which belonged to the former Soviet Union until its dissolution. It was Christianized as early as the fourth century AD, although due to the strong influence of Iran and Turkey, the Muslim faith also predominates in some regions. Today the Ortho-

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dox Church plays a major role in public life and is active in suppressing the genre of lamentation because it is not seen as a Christian tradition. Lamentations are found in all parts of Georgia. Nowadays it is still practiced, above all in mountain regions such as Pshavi, Khevsureti and Tusheti (Azik'uri 2002).

2.1 Religiosity

Institutionalized religious practice was discouraged during the Soviet period. In the case of Georgia, however, this did not mean that people abandoned all religious activities. If, following Luckmann (1967), we regard communal concern with the great transcendencies, such as combining this mundane world and the hereafter, as religion, then Georgian everyday life continued to have many religious moments.

Georgian grief rituals can be regarded in this sense as a staging of folk religion. In Georgia the lament is assigned the official function of softening the ground for the deceased to make her/his way into the hereafter. People think of it as a form of honoring her/him and the family. In folk religious belief, the choreography of the overall activity complex is related to the life which the departed person can expect in the next world. A dignified parting is said to promise an honorable reception in the afterlife.

When someone dies, people in the Georgian villages still perform joint mourning for many days, including day-long lamentations by women and ritual night wakes held around the coffin by men; neighbours ritually prepare meals for all those sharing in the grief, and there are various large meals held in connection with the funeral as well as special memorial days later in the year, at which masters of ceremony (called *tamada*) follow a toasting order canonized specially for 'sad meals' (*ċiris supra*). The various actions and forms of expression are regarded as related to people's emotional needs, but they always have concomitant religious and moral dimensions (Durkheim [1915] 1965), which sometimes are made explicit within the ritual of shared grieving. In the last twenty years, even in the villages this practice has diminished to different degrees. At the end of the article we will take a close look at these processes of change and their possible causes.

2.2 Verbal art creating a transcendence space

On the verbal level of lamentation poetic forms are conspicuous. Following Jakobson (1960) we assume that poetic forms are by no means limited to canonized art. The poetic function is present when the principle of equivalence is projected from the axis of selection to the axis of combination; equivalence is raised to a constitutive procedure of sequencing. This will later be shown on the basis of a lamentation text. Lamentations are always "staged discourse" in the sense of Iser (1993). Staging or performance relates to aestheticized communication in a narrow sense. Georgian dirges offer to their audiences a performance, employing engagement of the body, gestures, mimicry, the para-verbal and the verbal level. With the concept of performance, we attempt to capture the semiotic multi-levelling of staged communication (Bauman 1978; Hymnes 1974, 1981). Additionally, the embodiment of emotion is always evident on many levels of behaviour, from voice to posture.

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Roman Jakobson (1960) sees the poetic and emotive functions as always closely linked; a view we follow here. Additionally, the lament provides a service to the deceased, the linkage of this world with the other, and the linkage of various "provinces of meaning" in the sense of Alfred Schütz's phenomenological sociology of religion (see Knoblauch 1996, 1999, 2009). I postulate that the stylized practice of ritual grieving creates a non-ordinary experiential and imaginative involvement and a space where the living are seemingly in contact with the dead, a "magic space" (Luhrmann 1989: 5). One cannot, however, limit the analysis of grief communication in Georgia to the verbal domain. The performance involves several expressive modalities. Thus, the wailing dialogues are always embedded in the context of the whole event. Text and context mutually form each other into a kind of "total artwork". This total artwork makes non-ordinary experiences possible.

2.3 Xmit naṭirlebi

The dominant form of ritual wailing is called *xmit naṭirlebi*. *Xmit naṭirlebi* means 'crying loudly with one's voice'. Also called *motkmiti tirili* (spoken weeping or wailing with the voice), this genre performs an "aesthetics of pain", as Caraveli-Chaves (1980) and Caraveli (1986) put it, for Greek ritual wailing. Lamenting is always a polylogue with much turn-taking. Sometimes, a woman laments and others hum the melody with weeping sounds, a stylized background wailing called *zari*. The lament performer (*moṭirali*) orients herself mostly to the dead person in the coffin, to various addressees in the room, or sometimes to the audience in general or to other deceased persons.

Over and over the *moṭiralebi* ('wailers') tell stories about shared experiences. The close female relatives and acquaintances sit around the coffin. Frequently someone stands up, leans over the open coffin and tells the deceased something. Often she makes those who enter the room the object of her address to the deceased person (e.g., "Look, even Nina from Ikoti came. She comes in honor of you, although she has five children. What a good woman Nina is."). The whole community listens to these praises. Addressing the deceased is a situated religious practice. When I entered the room, the *moṭirali* often told the deceased that people came even from Germany in honour of her/him. I was always given a role in the ritual process as was everyone else. We can speak of a "split audience" here in the sense of Goffman (1981). Some are official addressees of the message, some bystanders. The deceased person is often told something very positive about those present, who as bystanders are meant to hear this. The deceased is again and again embraced and kissed. If someone new enters the room, the lamentation continues reinforced.

Women arriving from distant villages climb out of the bus and immediately begin lamenting. This indicates how large the ritual space is. It is most definitely not confined to the deceased person's house. They approach the deceased loudly shouting something like: "Elisa, how could you leave us so soon? Do you want to meet your husband? Oh, Otar, now you have her back.", not greeting anyone. Accusations of leaving too soon are among the frequent speech acts. No one smiles. Not to smile is an important part of ritual body politics. It requires a control of the body which many Georgians are better at than others. In most of my 20 ethnographic participations in mourning ceremonies, the natives recognized foreigners through

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their smiling. Men stroll past everyone and say: *viziareb tkvens mcuxarebas* 'I share your grief'. Then they sit down on benches in front of the keening room, often for hours or even days. They chat about everything imaginable there, but always softly and without laughter.

Every region sees its own performative lamentation style as the most appropriate and also the most natural (Kotthoff 1999b). In West Georgia mourners unbind their hair and tear at it constantly. They also scratch their faces — forms of self-injury, which are observed as an expression of grief in many cultures (Danforth and Tsiaras 1982; Stubbe 1985). This is regarded in West Georgia as a strong expression of pain — in East Georgia it is regarded as a completely inappropriate exaggeration. In the sociology of emotions, it has been assumed since Durkheim (1915) that emotions can combine with other feelings and moods; these can become "meta-affects" (as Urban [1988] put it in a study on wailing in Amerindian Brazil). Thus, even mourning itself becomes "correct mourning" — with varying cultural standards of appropriateness for the expressive repertoire. Grief can, e.g., be quickly linked with the wish for support by the group, with the wish to fictionalize the world of the deceased and with the need to master the situation, to let it not overwhelm the mourners.

Not only the days-long dialogical lamentations, but also elaborate drinking toasts (Kotthoff 1995) during mourning meals are still very popular in Georgia today. Only in the capital of Tbilisi lamentation is no longer practiced, at least not among the Tbilisians. In the villages, however, anyone who can lament beautifully or formulate beautiful drinking toasts helps to shape the feelings of other persons present. She who laments well is regarded as a good woman and knows what she owes the deceased in the other world and her people in this world. She thereby also manages the linkage of this world and the hereafter in theatrical, art-oriented communication.

3 Aesthetics in the lamentation for Dimiṭri Gabrielašvili

Again and again — from Radcliffe-Brown [1922] (1964) and van Gennep (1909) to Ariès (1981) and Meuli (1975) — the literature on transitional rites states that shared grieving creates a community, or at least recreates communities after a loss. Through performance analyses we can show in detail how the social communalization of grief is communicatively acted out. Aesthetic strategies play a role in communalizing both the living and the living with the dead.

I would like to point to five strategies which in my view carry relevant aesthetic dimensions in Georgian lamentation. Following Tannen (1989) we call the first dimension a "sound strategy" (the vocal, musical and poetical delivery) and the other four "sense strategies" (constructed dialogue, sudden address shift, formulaic self-sacrifice, imagery and detailing). Together they play a major role in creating an extraordinary realm of dramatic experience. Mutual participation in scenes that are put on stage is invited. For Georgian grief rituals I support Tannen's (1989) idea that music and evoked scenes trigger emotions and "that scenes are crucial in both thinking and feeling because they are composed of people in relation to each other, doing things that are culturally and personally recognizable and meaningful" (Tannen 1989: 101).

Of course, part of the scenic arrangement is the structure within the room where the coffin stands. Usually the grievers stand or sit beside the coffin.

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The sound strategy basically consists in speaking (or singing) in lines and in many forms of parallelism. Speaking in line form is a sign of poeticity (Hymnes 1981). With all wailers, lines are fairly easily recognizable through breathing. Often a line begins with sobbing inhalation. The lines are of different lengths. Crying sounds often mark a line's end. There is melodic delivery throughout. The melody is repeated line by line with some variation. The first syllables of a line are presented in a higher tone register, and at the end the tone falls. This intonation pattern basically prevails, but there is always slight variation.

Additionally, we find many anaphora and alliterations which are all based on sound repetition. Poetry scholars have regarded such recurrent patterns of sound as basic to verbal art. Finnegan (1977) writes that the most marked feature of poetry is surely repetition, which sends metamessages of rapport between the communicators. Thus, all these strategies of aesthetization create and symbolize community.

We will discuss three successive turns from the lamentation for Dimiṭri (Miṭa) Gabrielašvili in this article. We taped the ceremony for him in the East Georgian village Mukhrani in 1996. He was an old man from the village who died of age. The lamentation can be seen as exemplary. In this sequence a neighbour and three nieces lament. Niece 3 sings. Singing is not obligatory, but in Georgian lamenting it is always possible. The sequence occurred in 1996 on the day before the burial, called *panašvidi* in Mukhrani (East Georgia). The ethnographic research reported here arises from long and intensive visits, continuing through many years of contact, especially with people from Mukhrani. David ċapuḳašvili, who taped this lament for us, specialized in staging the musical background for laments. He possesses a collection of mourning music (Western classical and Georgian folkloristic) and a cassette recorder. He is called to many mournings and acts there as a sort of disk jockey. Such "mourning disk jockeys" are found in many villages.

We first look at the neighbour's turn. In line 1 the neighbour instructs the deceased, Miṭa, who lies in the room in a coffin, that he should take her tears to her brother in the hereafter. Symbolic condensation is explicitly evident here. Crying is not just crying, but takes on other functions: The deceased can take the tears which he receives for the others with him in the hereafter and share them; they should make existence easier for the whole community of the deceased, soften the earth for them. By evoking the image of sharing the tears, a community of the dead and with the dead is evoked.

Line 2 also represents an instruction to Miṭa. He is supposed to talk to the neighbour's brother, who is already in the hereafter. She imagines the two men meeting there and talking to each other. In line 3 the neighbour directly addresses her deceased brother in the hereafter, who thereby becomes the main addressee of her message. In line 4 she shifts address and talks again to Miṭa. In line 5 she cites her own words, which is marked as such by the particle *tko* at the end of the line because this quotative is used for the second and third person in Georgian. It results from the verb *tkma* 'say'. In Georgian reported speech is grammaticalized. Instructions like this are a special case of reported speech. Following Tannen (1989), direct quotations can be viewed as a narrative involvement strategy. The neighbour stages the dialogue that is supposed to take place between Mita and her brother in the hereafter and consequently makes it palpable for her audience. The neighbour goes on, directly addressing the brother, but in the post-particle (*tko*) in line 7 the imperative orientation in the sense of 'tell him' is grammaticalized. The particle *tko* is used when one

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person asks another to transmit a message to someone. The animated speech produces a triple address, directed to both the deceased brother, the neighbour in the coffin and the present people. Line 8 is still triple direct quotation, consisting of what Miṭa should say to the brother in the hereafter and what she herself is already directly telling him (and everybody is supposed to hear how good Suliko and Soso are). While she addresses the brother in line 8, in line 9 she addresses Miṭa. It is not absolutely clear to whom line 10 is addressed, but presumably to Miṭa, because of the 'also': she compares Miṭa's children with her brother's. All the children are imagined to act positively in their fathers' sense. Since they are present, she confronts them with her expectations concerning the children's behaviour. We witness a moralizing function here, which indeed plays an important role in the lamentations (Kotthoff 1999a; White 2002). In line 11 she explicitly addresses Miṭa, giving him further instructions as to what to do for her brother in the hereafter. He should calm him. Line 15 contains another very frequent formula whose grammatical form allows many variations. Here, the subject and the object are presented in the third person, so that the lamenter sees herself from the perspective of 'his sister' from Miṭa's point of view. She then continues to talk primarily to Miṭa. She also instructs him as to what he should not tell her brother (about political unrest in Abxasia, line 17).

Genacvale is a frequent formula meaning roughly 'I take your place', as discussed in Section 3.3 below.

The transliterated line is here the location of the transcription symbols. Transcription conventions: % = sobbing or crying sound, : = vowel lengthening, ('H) = audible inhalation, here often sobbingly done. The other conventions are the usual ones in conversation analysis. Punctuation marks are used as intonation signs.

(1) 1 Neighb .: *აი, ჩემი ცრემლები წაულე იქ იმასა შენ გენაცვალე, მიტა*
ai:, čemi cremlebi ṗaule ik imasa šen genacvale miṭa
'here, my tears take take there for him you genacvale, Miṭa
here take my tears for him genacvale Miṭa

2 *უთხარი ჩემ დაჩაგრულ საცოდავ ჭკვიან ძმასა*
utxari čem *dačagrul, sacodav čḳvian ʒmasa*
tell my oppressed, poor smart brother
'tell my oppressed, poor, smart brother'

3 *ძმაო, ძმაო, შენ მოგიკვდეს და, ძმაო*
('H) ʒmao, ʒmao:, šen mogiḳvdes da, ʒma:o%%
'brother, brother, for you should die sister, brother
brother, brother, your sister should die for you, brother'

4 *უთხარი, უთხარი, მოტყუებულო, საცოდავო, ძმაო-თქო*
('H) utxari, utxari, ('H) moṭquebulo sacodavo ʒmao-tko
'tell him, tell him, deceived poor brother (I say)
tell him, tell him, my deceived poor brother (tell him)'

5 *შენი შვილები შენ ნაკვალევს მისდევენ-თქო*
('H) šeni švilebi šen naḳvalevs misdeven-tko
'your children your traces are following (I say)
your children are following your traces (tell him)'

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6 *შენ შვილებს მოუკვდეთ მამიდა- თქო*
(ʼH) šen švilebs mouḳvdet mamida%- tko%%
‘your children should die father’s sister (I say)
your children’s aunt should die (tell him)’

7 *რაც რო პირიდან ამოგსვლია, ძმაო,*
(ʼH) rac ro ṗiridan amogsvlia, ʒmao,
‘what of your mouth came out, brother,
what came out of your mouth, brother,

8 *ყველაფერს იმას აკეთებენ- თქო*
(ʼH) qvelapers imas aḳeteben- tko
everything that they do (I say)

9 *შენი სულიკო და სოსოს არავის დარიგება არ უნდა*
(ʼH) šeni suliko da sosos aravis darigeba ar unda
‘your Suliko and Soso no one corrections does not need from
your Suliko and Soso need lessons from no one’

10 *გენაცვალე, მიტა*
genacvale, miṭa
genacvale, Miṭa

11 *შენი ბიჭებიც ეგრე გააკეთებენ, დაგაფასებენ,*
šeni (–) biče̩bic egre gaaḳeteben, dagapaseben,
‘your boys also thus will do,
გენაცვალე
genacvale
will treasure you, genacvale
your boys will also do thus, will treasure you, genacvale,’

12 *ჯერ-ჯერობით, მიტა, უთხარი, გენაცვალე*
ǯer-ǯerobit, miṭa, utxari, genacvale
‘now still, Miṭa, tell him, genacvale
now still, Miṭa, tell him, genacvale’

13 *შენი სახელი არ შეურცხვენიათ-თქო*
šeni saxeli ar šeurcxveniat-tko
‘your name not they have embarrassed (I say)
they have not embarrassed your name (tell him)’

14 *და-ძმურად გეუბნები, გენაცვალე, გთხოვ, გეხვეწები, დაამშვიდო*
(ʼH)da-ʒmurad geubnebi, genacvale, gtxov,
‘sister-brotherly I tell you, genacvale, I ask you,
sisterly I tell you, genacvale, I ask you,

15 *გეხვეPები დაამUვიდო,*
plea with you, calm him’
plea with you, calm him’

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16 *დაამშვიდო, დააწყნარო, ის და-დამიწებული, მიტა,*
(ʼH) daamšvido, daaçqnaro, is da- damiçebuli, miṭa:%%,
‘calm him, console him, his sister buried, Miṭa
calm him, console him, his sister should become earth for him, Miṭa’

17 *იმას მოუკვდეს და იმას მოუკვდეს და*
(ʼH) imas mouḳvdes da%%% imas mouḳvdes da%%%
‘him should die sister, him should die sister
his sister should die for him, his sister should die for him’

18 *აბა, კაი ამბები მიუტანე, გენაცვალე,*
aba (ʼH) ḳai ambebi miuṭane, genacvale,
‘well good news bring him, genacvale
please bring him good news, genacvale’

19 *არ უთხრა, რო ესე არევ-დარევა*
ar utxra, ro ese arev-dareva::
‘do not tell him, that there unrest
do not tell him that there is unrest’

20 *თორემ იმის სულს აფხაზეთში გაუხარია, გენაცვალე*
torem imis suls apxazetši gauxaria, genacvale
‘or else his soul in Abxazia has enjoyed, genacvale
for his soul experienced much joy in Abxazia, genacvale’

21 *პირველ რიგში იმას ეძახიან ყველაფერში*
p̣irvel rigši imas ezaxian ɣvelaperši
‘at first line him they call in everything
people always called him as the first’

22 *აბა, მიტა, დალოცე შენი შვილები, გენაცვალ*
(ʼH) aba, miṭa, daloce šeni švilebi, genacvale
‘well, Miṭa, bless your children, genacvale
well, Miṭa, bless your children, genacvale’

23 *შენი კატოსთვის ილოცე, ავადმყოფია, გენაცვალე*
(ʼH) šeni ḳaṭostvis iloce, avadmɣopia, genacvale
‘your ḳaṭofor pray, she ill is, genacvale
pray for your ḳaṭo, who is ill, genacvale’

24 *მთელი ღამე მაგაზე ერთი ოთხ-ხუთჯერ უნდა ვიფიქრო*
mteli ɣame magaze erti otx-xutǯer unda vipikro
‘the whole night about that once four to five times must I think
at least four to five times in the night I must think’

25 *ნეტა როგორ იქნება, ნეტა როგორ იქნება*
neṭa rogor ikneba, neṭa rogor ikneba
oh how will she be, oh how will she be
‘how might things go for her, how might things go for her’

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26	ვაიმე.
	vaime%%
	uime
	‘oh woe’
	((music))
27	უიმე უიმე
	uime uime
	‘oh woe oh woe’
	((0.5))

The neighbour modulates her voice for the lament: she speaks with a loud, creaky voice. Modulations of the voices are often used in lamentation as stylization.

I will continue by elaborating the already mentioned phenomena of artistry in lamentation.

3.1 Constructed dialogue

Constructed dialogue can serve as an intertextual link between many events. In Georgian lamentation we very often find a special form of it: In giving instructions to the lamented person as to what s/he should tell other deceased persons in the hereafter, the lamenter quotes her words which are meant to be expressed by the newly deceased person to those already in the afterworld. Thereby she makes the dead person in the room a mediator. As Bauman (2001) points out, in mediated communication we have discursive practices that transcend the face-to-face speaker-hearer dyad, a relaying of spoken messages through intermediaries. Lamentation can also become a speech routine by a mediator of utterances from a source to an ultimate targeted receiver, a long-deceased person. This procedure here symbolically unites the living and the dead.

In lamentation we always have an audience which is the receiver of the whole performance, even though messages are often not addressed to it. Since lamentation only takes place in front of an audience, it is an important factor of that discourse.

Miṭa is supposed to take the quotations along as a message from the neighbour. He should tell her dead brother that his children are following in his footsteps (line 5), that they do what he told them (line 7), that they need lessons from no one (line 9), that they have not embarrassed his name (line 13). The children are meant to hear her praise. They are of course also target addressees of her words as is the whole community.

The voicing used in lamentation performances can generally be understood in terms of Soviet cultural semiotics (Bakhtin 1981), which analyzed the functions of direct and indirect quotation in fiction. Voloshinov [1929] (1978) distinguished two types of reported speech in fiction. The type which works with indirect quotation is said to be concerned with the stylistic homogeneity of a text. The other type individualizes the language of characters and also the language of the teller. Characters are identified through their own speech style, through direct animation. Direct animation permits ellipses, omissions and a variety of other emotive tendencies which would be lost in indirect quotation. Direct quotation

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evokes “manner of speech”, not only individually, but also typologically. It is “speech about speech, utterance about utterance” (Voloshinov 1978: 10).

Tannen (1989), Brünner (1991), Günthner (1999), and Couper-Kuhlen (1999) have shown that reported/animated dialogue can contain verbal and intonational characterizations through which — on the basis of stereotypes — images of persons, social groups, etc., are transmitted. By the polyphonic layering of voices (Günthner 1997: 248), protagonists are implicitly stylized and evaluated. The speaker anchors the voices in a story world and animates them in a way that corresponds to her current intention.

Brünner (1991: 7) underlines the performative character of directly quoted speech. Goffman (1981) uses the term “animated dialogue” in order not to suggest that it might be realistic reproduction.

Throughout the text the voices of the deceased are intertwined with those of the living. The lamenting neighbour, for example, unites her dead brother and his children as addressees of her messages. Thereby a community of the living with the dead is again and again symbolized. The reality of this community is one of the basic religious convictions of most Georgians. It is conversationally (re)created.

3.2 Multiple address and sudden address shifts

Connected with animated dialogue is the phenomenon of unannounced address shifting as another strategy of community formation. Multiple address is more the rule than the exception in Georgian laments. Sometimes it is hard to determine who the target addressee is and whose dialogue is being performed. Address shifts are very often not explicitly announced, so that the auditors must infer whose speech is being put on stage. In line 25 the neighbour directly addresses the absent woman ḳato by quoting to the public her own nocturnal thoughts about ḳaṭo. In line 23 she asks Miṭa to pray for the ill woman ḳaṭo who is a relative. Since ḳaṭo’s other relatives are also present in the audience, they witness how the *moṭirali* cares about her. In discussing the turns following the already presented one, we will return to this strategy.

3.3 Formulaic self-sacrifice

The first line contains the formula *genacvale*. Laments are permeated with this formula which often marks the end of a line (such as in lines 10, 12, 18, 20 and 22). It can very well make a line or make a line together with a name, such as in line 9. *Genacvale* expresses the process of immersing oneself in a person’s sorrow and can be translated as ‘I take your place’. *Genacvalos deda* accordingly means ‘I take mother’s place’. Boeder (1988: 13) writes that in a certain contextual position one can just as well translate the formula as ‘I die for you’. First, there are the abundant, often-repeated formulae whose fundamental semantic pattern states, at least etymologically, the following: the speaker wishes to shoulder the burden of pain (the illness, misfortune) which the person addressed suffers. The addressee’s misfortune should be conveyed to the speaker; the lamenter wants to symbolically shoulder the suffering person’s pain.

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However, as is often the case with formulae used to express strong feelings, their semantics is weakened in everyday life. In Georgia one hears this formula so often and in so many contexts that it can be taken as a mere expression of sympathy. There are many other formulae using the semantics of shouldering another person's suffering, for example "your sister should die for you" in line 3 and "your children's aunt should die" in line 6. The most common form is *šen mogiḳvdi* ('I should die for you') as uttered by niece 2 in line 50. It is interesting that the neighbour does not say "I should die for you", but sees herself as her brother's sister or his children's aunt.

Perspectivity seems to play an interesting role in the use of formulae. Very generally, all humans' perceiving and acting is done from a specific viewpoint which, together with the scope and other structural characteristics of perspective, determines the space of perception and activity. Every experience is normally present in those aspects that are seen from the spatio-temporal point of view taken by the subject (Graumann 1989). In lamentation, however, experience is sometimes explicitly presented from the point of view of a deceased. Normal subjectivity of the experiencer/speaker is thereby symbolically deleted. The same is done in lines 14, in the formula "his sister should become earth for him" and in 17. The perspectives of several dead and living persons are thereby symbolically combined. Formulae of wanting to suffer for another or even exchange places with the dead play an important role in Georgia — as in the Near East in general (Boeder 1988). They have various pragmatic functions which, for reasons of space, cannot be explained in detail here. Line 6 is primarily addressed to Miṭa, but targeted at the brother, and it integrates an even greater complexity of perspectives than in line 3. The neighbour sees herself as the aunt of her brother's children; in this role she wishes to perform a ritual self-sacrifice which would make her equal to her brother. We see here various communicative communalizations symbolically brought about, father and children, brother and sister, and all (the living children and the sister with the deceased father/brother) together.

Obviously, the repeated use of formulae also contributes to sound coherence. As an illustration, consider how many lines are connected by variants of *šen mogiḳvdi* ('I should die for you') or *šen mogiḳvdes da* ('the sister should die for you') or other variations of the same formula: 3, 6, 17, 43, 44, 48, 50, 55, 61.

Turn-taking is also poeticized. Opening up the closing of the wailer's turn often begins with an interjection or formula employment. *Vaime* is similar to the English "woe", an interjection which expresses sorrow and suffering. The neighbour closes her turn with this interjection and with crying sounds. Also, niece 1 in finishing her turn combines crying, the interjection *vaime* and the rhetorical question "what shall I do". Niece 2 closes her turn by the formula "*šen mogiḳvdi*" ('I should die for you'), and niece 3 utters "*vai vai ra mçare xar, miṭa ʒia*" which again consists of interjections and a formula of suffering. Besides expressing grief, formulae, interjections and also crying sounds help to structure the lament.

3.4 Detailing and imagery

A major form of creating conversational involvement in lamentive sensemaking is organized by imagery: the power of images to communicate meanings and emotions resides in their ability to evoke scenes, as we will see in the next excerpt from the lament for Miṭa.

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Like constructed dialogues, details create vivid pictures, and understanding is derived from scenes in which people are placed in relation to each other. Details create mental images and can stand as metonyms for larger experiential chunks. The individual imagination of the wailer invites group imagination. Thus, a collective memory of the time spent together is not only organized but celebrated. Details and imagery play an essential role in making the *xmit naṭirlebi* easy to memorize. Thus, the lamenting women play a major role in constructing social memory. The particularity and familiarity of details such as those communicated from line 16 onward in the neighbour's turn is very moving.

In line 16 the neighbour starts telling Miṭa to pass on only good news. Again and again we find instructions as to what should not be said in the hereafter in the taped laments. Very often political unrest is mentioned, of which there were various cases in the past few years, e.g., the war with Abkhazia. The neighbour gives the detail that her brother was always immediately invited when he went to "Abkhazia" (line 20); many Georgians had relatives there. The listeners are invited to create the whole scene of such an invitation themselves. In inviting all those present to recall what wonderful times they had spent in Abkhazia, political positions are given voice, and a political memory is kept alive. To invite and be invited points to moral values that are highly regarded in Georgian culture. The deceased Miṭa and those present are united in the remembered scenes.

Let's look at the next turn. One of Miṭa's nieces takes the turn:

(2) 28 Ni 1: *მიტა ძია, მიტა ძია არ შემიძლია, რო არ გიტირო*
miṭa zia %%%% mita zia %%% ar še%mizlia%, ro ar giṭiro
'Miṭa Uncle, Miṭa Uncle not I can, how not to cry about you
Uncle Miṭa, Uncle Miṭa I cannot manage to not cry about you'

29 *მე ტირილი არ შემიძლია„*
('H) me ṭirili ar šemizlia %%%%%
'I cry not can,
I cannot lament (well) '

30 *არ შემიძლია და აივსო გული*
('H) ar šemizlia da ai%vso guli%%%%,
'not I can and is filled heart
I cannot, but my heart is filled'

31 *შენ ხომ მამაჩემს არ ელაპარაკებოდი*
('H) šen xom mamačems ar elaṗaraḳebodi%%%%
'you at all my father not speak with
you did not speak with my father'

32 *რო შერიგდით, როგორ უხაროდა,*
('H) ro šerigdit, rogor uxaroda%%%%%
'as you reconciled, how happy he was
as you reconciled, how happy he was'

33 *რად ჩამოსტეხე მხარი*
('H) rad čamosṭexe mxari %%%%
'why did you break his shoulder
why did you leave him alone'

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34 *ვაიმე, რალა ვქნა, მიტა ძია არ გაგიშვებთ*
('H) vaime, raŕa vkna%%%%%, ('H) miṭa zia, ar gagišvebt%%%%%%
'uime, what can I do, Miṭa Uncle, not we will let you go
oh woe, what can I do, Uncle Miṭa, we will not let you go away'

35 *ჩავჭიდებთ დიშვილები და ძმიშვილები*
('H) čavčidebt dišvilebi da zmišvilebi,
'we place ourselves there sisterchildren and brotherchildren,
we place ourselves there, sisterchildren and brotherchildren,

36 *ხელს და არსად არ გაგიშვებთ*
xels da arsad ar gagišvebt %%%
hands and now here not we let you go
hand in hand and do not let you go away'

37 *ვაიმე რალა ვქნა, ვაიმე რალა ვქნა,*
('H) vaime raŕa vkna%%%%%, vaime raŕa vkna %%%%%
'uime, what shall I do, uime, what shall I do
woe, what shall I do, woe, what shall I do'

38 *მამაჩემი როგორ დალონებული არი*
('H) mamačemi rogor daŕonebuli ari %%%%%%%
'my father how sad he is
my father how sad he is'

39 *ერთს არ გვათქმევინებდა, ხალხო, მიტა ძიაზე ცუდსა*
('H) erts ar gvatkmevinebda, xalxo, miṭa ziaze cudsa, %%%%%
'once not he let us speak, people, Miṭa uncle about bad
he never let us, people, speak bad of Uncle Miṭa'

40 *ვაიმე, რათა ვკნა ვქნა, ვაიმე*
vaime, raŕa vkna, vaime%%%%%%%%
'uime, what shall I do, uime
oh, woe what shall I do, oh'
[%%%%%%%%

The initiating trope of the niece, that she cannot cry but simply must, because her heart is so full (line 30), is a stereotypical opening but nevertheless points to the value of high involvement. Lamenters often claim that they cannot act other than they do. Then she speaks to Miṭa and thereby also to those present about the disagreement between Miṭa and her father. She gives some details about Miṭa's and her father's behaviour and feelings, for example, that her father allowed no one to speak ill of Miṭa. Everyone can hear that the father held Miṭa in high esteem and still does, despite the disagreement. A reconciliation between them had already occurred during his lifetime; it is regarded as very important in popular religion to reconcile oneself before death. Then the niece fictionalizes images of not letting Miṭa go (line 34, 35). Again, she tells of her father. It appears to be morally important to let everyone know that her father and Miṭa parted on good terms, but she

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does not tell the whole story of their quarrel. The audience can complete the scene from knowledge of similar ones from their own experience.

All these strategies make the discourse vivid and imaginative. Together, the poeticized line structuring, the special vocabulary of the interjections and formulae, constructed dialogue, detailing, imagery, and multiple address have an involving and evocative effect. They create the sensual experience that is necessary to combine oral art with magic.

As Finnegan (1977) pointed out so convincingly in her work on oral literature, we never have the texts in isolation. They have to be understood in connection with the processes of which they are a part. I would like to add that we also do not have artistry in isolation. In the Georgian grief complex, most artistic elaborations play a role in staging religion. Therefore, I would like to point to some other dimensions of the ritual process.

4 On the external structure of Georgian grief rituals

Ritualization starts as soon as a death is made public. The family in which someone has died announces the death by crying loudly (*šecxadeba*) around the village. This cry is of course seen and experienced as a cry of shock but it also initiates a special period for the whole neighbourhood. Now it is the duty of neighbours and relatives to hurry to offer their assistance. The grieving family is provided for by neighbours until the burial. Work and festivities all stop at once. Ablutions with ritual provision of wash water begin. In East Georgia the wash water must be dumped far from the house as impure. In some West Georgian regions, it is regarded as luck-bringing water for use in irrigating the fields. Regional differences are written into the grief complex in many places. It is important to note that the performances of lamentation styles between East and West Georgia differ greatly (Kotthoff 1999b).

The recreation of regional culture is one layer of the symbolic in the ritual process. All mirrors are immediately covered with black cloth in order to avoid seeing the deceased's reflection. According to folk belief this would mean death for the affected persons. The deceased is then dressed, in Georgia usually in Sunday clothing. The grieving family is not permitted to wash themselves. All forms of personal hygiene are halted. In the period up to the burial, neighbours and male relatives hold night vigils over the dead. They sit around the fire while doing so. People believe that the deceased, including the one who has just joined them, will also meet around the fire in the afterworld. We can observe a continuing parallelization of earthly ritual action with what is supposed to happen in the hereafter. Thus, it is also assumed that wine or vodka and roasted sunflower seeds, which all neighbours bring with them, are likewise eaten by the deceased. During the night-watch the visitors must enjoy themselves, in order that the deceased can also enjoy the merriment.

Interesting mixtures of orthodox Christianity and elements of natural religion are observable in all Georgian regions. In former times the church played no role in the grief ritual complex. In the post-communist era, however, it has become customary for a priest to visit a family, bless the deceased and the mourning family, offer prayers and provide advice on the ceremony. As we know, in the communist period church religious exercises were inopportune. Forms of unofficial religious practice, however, were all the more popu-

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lar and were also more difficult to persecute, since they were exercised privately. Nowadays, the Orthodox church tries to gain influence everywhere. Although the grief rituals were and still are unallied with official religion, and very often act out visions of the hereafter incompatible with official Christian doctrine, most Georgians are very willing to integrate a priest into the ritual. The church nowadays enjoys high prestige.

In folk religion all of ritual mourning is regarded as a sacred duty to the deceased person. The standards of appropriateness by which lamentation performances are judged combine religion and art. When ritual activities are forgotten, the community of the deceased may, according to religious ethnotheories, be offended and revenge itself on the descendants of those who carried out their duties poorly. Concern for the well-being of the deceased in the hereafter is thus omnipresent in everyday Georgian life, and it is always linked with concern for one's own well-being. Since every family lives in a close social network, which also displays its supportive capacity in a phase of grief, each death is an event of great social significance for the whole community. Accordingly, as part of the lamentation, many photographs of other deceased persons are arranged on the table behind the open coffin. These deceased persons are believed to receive the just deceased in the hereafter, and they are often directly addressed in the lament.

Everywhere the ritual has a temporal order to follow. In Georgia the burial must take place at the latest on the seventh day after death, at the earliest on the third day. During the last day people lament until the coffin is lowered into the grave. After the burial *kelexi* takes place, a large 'sad meal' is prepared and eaten. Typical foods served include *pxali* (various vegetable pastries), *lobio* (a bean dish), *candili* (potatoes and wheat cooked in honey), *bozbaši* (a soup made from lamb with vegetables), *xaslama* and *šilaplavi* (a rice dish with meat from the joints of lamb and black pepper).

On the seventh and fortieth day people mourn and lament again; again, there are meals. In Xevsuretia and Tušetia the lamentation is held over the so-called plasi, a rug on which selected personal possessions and pieces of clothing belonging to the deceased person have been arranged. These are afterwards given by the family to good friends of the deceased. After a year, a very large meal in honour of the deceased is held, called *ċlistavi*. Now *ċeris gaxsna* must take place, the 'raising of the roof' (the end of grief). The meal ends with cheerful toasts to those present, the living. Now normality is supposed to be reestablished. For example, marriages can be celebrated again.

Many of the named activities can be carried out with more or less aesthetical elaboration. People may dress the deceased elaborately or not, etc. They can arrange many flowers in the room and thereby beautify it. They can lay the table beautifully, decorate the food, and much more. Standards of appropriateness always prevail, which are prescribed as unwritten law for the purpose of common mourning. The small step to what is seen as "overdone" would be just as fatal as dispensing with aesthetic considerations. Standardization allows minor individual deviations.

5 The current situation of the genre

While in some parts of the world the genre of lamentation is losing importance (in Russia and Italy, for example), in some other parts it is being revitalized as "poetry therapy".

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Hiltunen (2007) criticizes the "post-Freudian stoic, tearless responses to death and grieving" (Hiltunen 2007: 61) which seem to dominate some Western reactions to loss. S/he sees a revitalization of the ancient Finno-Karelian lamenting traditions as offering a transpersonal alternative to express grieving, recognizing not only the spiritual needs of the mourner, but also of the community. The ancient tradition is thus modified for purposes of contemporary transpersonal grief work. Georgia's mourning culture has in the last three decades been affected by changes in political, economic and cultural life, but so far, the extent of change is unclear. Manning (2007) describes independent Georgia's economy as "ridden by crisis and conspiracy" and most international agencies express similar impressions. Change points in the direction of reducing the relevance of time-intensive mourning rituals in many Georgian regions, to a lesser extent in the northeastern mountain regions of Pshavi, Khevsureti and Tusheti (Azik'uri 2002). Although a full picture of recent mourning practices is currently not at hand, we state with Ninoshvili (2012: 8) that lamentations sometimes become televised media events; she discusses, for example, the film of a mother lamenting for a prominent son while at the same time campaigning for justice after losing her son in state-sanctioned homicide, like that of Sandro Girgvliani in 2006.

People to whom my colleague Elza Gabedava and I talked in Mukhrani (Mukhrani is the main area of our research) speak of a decrease of lamentation practices over the last 30 years. They name developments that have affected Georgian everyday life since the collapse of the Soviet Union. We cite a few that were often mentioned when we interviewed ten Mukhranians aged 50 to 70:

1. Wars (civil war at the end of the 1990s, wars in Abkhazia and Southeast Ossetia, war with Russia 2008); revolutions (Rose Revolution 2003), fall of governments (Gamsakhurdia, Shewardadze), with all the associated uncertainties;
2. an almost bankrupt economy (see also Zwass 2016), high unemployment;
3. rapidly increasing crime rates (going as far as gang wars);
4. mass migration of population abroad (more than a million Georgians have emigrated, almost 1.2 million Georgians are unemployed and seeking work – half of the Mukhranians work in Greece, Spain, Portugal, and Turkey as low-paid laborers on construction sites, in agriculture, or as caregivers for aged and sick people);
5. since political independence was declared, gradually increasing contacts with Europe and the US have developed and brought about migration thence, as well as service and study visits, and vacation trips made by a small group of well-to-do persons.

The enormous political, economic, cultural and ecological changes in the country, as well as the unprepared, forced transformation of "Homo-Sovieticus" into the flexible persons capitalism needs (Sennett 1998), have changed Georgians' belief systems, their worldview and their emotional politics. The culture of death is somehow affected by these changes. The relationship of people to death in general and the expression of grief in particular seem more restricted today according to our informants. The question comes up whether death, which was previously worked through by communities as a major event that elicited strong feelings in families, relatives and friends, and demanded performance by the female participants, including even persons only indirectly affected (neighbours, acquaintances, coworkers), is undergoing trivialization.

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6 Concluding remarks

Lamentation is a ritual of shared grieving which reinforces and intensifies sociality among village people, especially among women. In these ritual dialogues the loss of a person is communalized, and by aestheticization it is quasi-therapeutically given aesthetic form. The loss is symbolically shared, whereby the social network of the whole community is reaffirmed. Artful speech, demanding bodily control during the performance of "being beside oneself", makes possible a consensual coming to terms with the loss and the creation of a shared cultural memory. The ceremonial genre of lamentations refers to cultural ties and emotional expression.

Ritualized genres of mourning occupy a broad space in the communicative household of Georgian culture. The simultaneous attention to the deceased and the living demands a high temporal, physical and artistic engagement. As artists of pain, lamenters enjoy a high moral reputation everywhere in Georgia (except Tbilisi). Their art is highly regarded not only in terms of genre criteria, but also in terms of criteria of individual expressive improvisation. A good lament evokes many tears among those present; it is "beautifully sad". Religiosity plays a stronger role in Georgia than it does in the Western world. Thus, there is no table where a drinking toast is not offered, asking for *šendoba*, forgiving the sins of the dead, in order that they can have peace.

Interestingly, the lamentation genre of the "unofficial religious" survived the Soviet period intact. It was too closely linked to emotional needs and too strongly integrated into normal everyday life for it to have been effectively forbidden.

Durkheim ([1915] 1965), van Gennep (1909), Radcliffe-Brown ([1922] 1964), Tiwary (1975) and many other anthropologists argued that the function of ritual weeping among those left behind is to affirm social bonds between two or more persons. In the case where the social tissue is threatened by the departure of a person, the social structure is knit together again by a theatrical performance of shared emotions. The Georgian *xmit natirlebi* simultaneously combine several purposes: They delegate the expression of feelings to women, they allow them to aestheticize these feelings of sadness on the occasion of death, they transmit them, organize social memory, and they bind the community together by sharing grief and reaffirming its moral values. For the lamenters, aesthetic grieving means to keep control over their feelings. They cannot let themselves go. For some of the listeners the process is the other way round. They are inflicted with their pain.

Lamenting women certainly perform *grieving work* (to use this term from German psychoanalysis [Mitscherlich and Mitscherlich 1967]), but much more, they perform *grieving art* as I hope to have shown.

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39 Emotions in social situations

1 Introduction
2 Emotions in interactions and close relationships
3 Emotions in socio-cultural contexts
4 Discussion, conclusion and future directions
5 References

Abstract: People's emotions don't occur in a vacuum: they are always embedded in people's social relationships and the broader cultural context in which they engage. Understanding people's emotional functioning, then, implies understanding how they experience and regulate emotions across different social relationships and cultural contexts. In this chapter, we first outline a dynamic socio-cultural approach to emotion. Subsequently, we show how both people's emotional experiences and regulation attempts are shaped by characteristics of the particular social relationship in which they occur as well as by the meanings and practices that are salient in their cultural context, each time highlighting the role of communication and language. In closing, we outline some of the current insights and limitations of this review, as well as describe some future directions for a multidisciplinary context-sensitive science of emotion research.

1 Introduction

Most of our emotional experiences and expressions occur in the context of *social* situations (Ekman 1984), implying the (imaginary) presence of other people as well as the significance of meanings and practices that are shared with those other people. For instance, when my partner (again!) forgets about the birthday party we were invited to tonight and texts me he will be home late, I experience anger towards him as well as shame and uneasiness upon imagining arriving late and alone at my friend's party – something that is totally unaccepted in our circle of friends. Hence, my emotional experience of anger, shame and uneasiness is not only shaped by the specific characteristics of the situation (i.e., unexpected obstruction of my goals caused by another person; Roseman 1996; Scherer 2005), but also by the social relationships (i.e., with my partner and friend) and socio-cultural context's meanings and practices (i.e., about how to relate to others) it is embedded in. Indeed, my emotional reaction might have looked quite differently if this was the first time my partner forgot about a party of a friend of mine or if my circle of friends did not render birthday parties that important.

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In the current chapter, we will review how both emotional experience and emotion regulation – that is, the deliberate modification of one's experience or expression (Gross and Thompson 2007) – is affected by the social relationships and socio-cultural contexts in which it occurs. Specifically, we will describe how interaction partners impact each other's emotional experiences (Section 2.1) and regulate each other's emotions (Section 2.2). Subsequently, we will document how emotional experiences are aligned with people's socio-cultural context's most prevalent goals and concerns (Section 3.1) and in which ways people regulate (each other's) emotions to instigate that alignment (Section 3.2). In so doing, we will – whenever we are aware of empirical research – highlight the role of language and communication in these different processes. Yet first, we will elaborate on a theoretical framework through which we can come to fully understand emotions in social situations.

1.1 A dynamic socio-cultural approach to emotions

Despite often being portrayed as such, emotions are *not* merely subjective feelings; they include physiological changes, preparations for action and, perhaps most important of all, how people give meaning to, and thus "appraise", the situation at hand (see also Frijda 1986; Mesquita 2010; Mesquita, Vissers, and De Leersnyder 2015; Solomon 2004). For instance, when I am angry with my partner for forgetting about the birthday party, I do not accept how he treats me, I feel entitled to get more than I got and I hold him responsible for the negative outcome of either arriving alone or late. By communicating my anger to my partner, whether through sending an unfriendly text message or clenching my teeth when he finally shows up, I aim to gain control over him, influence him and correct his behavior (Frijda 2007; Frijda, Kuipers, and Schure 1989; Stein, Trabasso, and Liwag 1993). Likewise, when I feel shame towards my "birthday friend", I have the feeling that I have failed in her eyes and have fallen short of the social norms of our circle of friends, and hold myself somehow responsible (why didn't I manage to make my partner care about this?). By communicating my shame, for instance by blushing and apologizing when finally arriving at the party, I seek to signal that I am aware of the transgression and that I aim to restore and maintain my social relationship with my friends (e.g., Keltner and Buswell 1997). Thus, apart from being subjective states, emotions also imply how people make meaning of and act upon their social world.

Defined like this, we can come to understand why both emotional experiences and emotion regulation attempts are shaped by the social relationships and broader socio-cultural contexts they are embedded in – namely, because these provide the backdrop against which people *make* meaning and *engage* in social action. Firstly, and situated at the most micro-level of the specific moment or situation, emotions are shaped by our interaction partners and, in particular, by these partners' emotional behaviors. Specifically, my anger towards my forgetful partner may take a very different course depending on what he says to me or does the moment he comes home. If he responds in a defensive way by saying that birthday parties aren't that important after all, my anger may readily turn into a fury. Yet, if he would apologize or make attempts to ease the situation, I may calm down and my anger may develop into a rather calm annoyance. Likewise, my emotions may take a

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different course depending on whether the friend to whom I tell this story shares my appraisal of the situation as very disrespectful, or challenges it by speculating that my partner is simply very busy at work. In the former case, I may feel strengthened in my anger; in the latter case, I may calm down a bit. Hence, which emotions people experience in response to a specific situation may hinge upon the people they are interacting with in the moment (see also Boiger and Mesquita 2012; Mesquita and Boiger 2014).

Secondly, since most emotional situations take place in the context of a developing or ongoing social relationship, "[e]motions at one particular point in time are afforded and constrained by the history of the relationship as well as by future projections of where the relationship may go" (Boiger and Mesquita 2012: 222). Indeed, the fact that my partner and I have been together for 15 years and he always forgets about the birthday parties of my friends, affords me to experience extreme anger in this situation, because our relationship history encourages me to appraise this particular situation as an instance of not caring about my friends or what I want. Yet if this situation would have happened in the context of a relationship with a quite recent partner, I might have spontaneously appraised the situation as one in which my partner must have been extremely busy at work and simply have forgotten. Hence, people's relationship histories and outlooks may encourage certain ways of evaluating the social world and acting upon it.

Finally, and situated at the most macro-level, emotions are shaped to be in line with their socio-cultural context because there are systematic socio-cultural differences in the prevalent and valued ways of relating to one another as well as of acting upon the social world (e.g., Markus and Kitayama 1991; Markus et al. 2006). Specifically, some socio-cultural contexts, like Western European and North American middle-class contexts, define a good person as independent, in control, successful and unique (Kim and Markus 1999; Rothbaum et al. 2000; Triandis 1995), and good relationships as those in which each partner remains autonomous, self-reliant, and high in self-esteem (Heine 2003; Hochschild 1995). In contrast, many East Asian, Mediterranean and working-class contexts define a good person as interdependent, adjusting herself to the situation, and as maintaining relational harmony (Lebra 1992; Kim and Markus 1999; Heine 2003), and good relationships as those in which partners are mutually dependent, interconnected and adjusting to each other's expectations. In so doing, these different socio-cultural contexts encourage and reward different ways of making meaning and acting upon situations, and hence, foster different emotional experiences. Thus, because my relationship with my partner is embedded in a middle-class Western European context that mandates me to remain independent, autonomous and standing up for myself, an emotion like anger is quite well accepted and functional in our relationship: It underlines my concern for autonomy, allows me and my partner to make readjustments to the relationship (Averill 1982) and, as such, helps us realize our socio-cultural context's relationship ideal. Yet, if I had lived in a Japanese socio-cultural context, for instance, in which anger is considered immature and childish (Azuma 1984; White and Levine 1986), experiencing anger would have been rather discouraged. Hence, the specific socio-cultural context in which social situations and relationships are embedded may foster the experience of certain emotions over others.

Taken together, understanding emotional experience and regulation not only requires an understanding of the specific situation at hand, but also of the interaction partners'

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emotional responses, their relationship history or outlook and the meanings and practices of the broader socio-cultural context they are embedded in. As Boiger and Mesquita phrase it, *emoting* is "a dynamic ongoing process that is constructed in the context of interactions, relationships, and culture" (Boiger and Mesquita 2012: 222). We here deliberately use the term *emoting* (see also Mesquita 2010; Mesquita, Boiger, and De Leersnyder 2017), because it may be clear by now that emotions are not "things we *have*", but experiences we actively and collaboratively "*do*" and thus *co-construct* with our (imaginary) interaction partners, based on the meanings that are available and encouraged in the specific relationship and cultural context we are engaging in.

In the remainder of the chapter, we will support the above outlined notions by providing a non-exhaustive review of the literature on how interaction partners impact each other's emotional experiences (Section 2.1) and regulation efforts (Section 2.2), and how these get further aligned with the socio-cultural context's most prevalent goals and concerns (Sections 3.1 and 3.2). In closing, we will discuss the current insights, limitations and possible future directions for multidisciplinary context-sensitive research on emotion (Section 4).

2 Emotions in interactions and close relationships

2.1 Emotion experience

As outlined above and as argued by various other scholars, other people and our relationship with them play an important role in shaping our emotional experiences, above and beyond the emotion-eliciting situation itself (Boiger and Mesquita 2012; Fischer, Manstead, and Zaalberg 2003; Van Kleef 2016). One of the clearest instances of this interdependence between interaction partners' emotional experiences are instances of emotional similarity, both in-the-moment and across time as social relationships develop. This process by which one person's emotions lead to corresponding changes in another person's emotions and hence emotional similarity, has been referred to with different terms (e.g., emotional convergence, synchronization, interpersonal emotion transfer, emotion transmission, emotional co-regulation, covariation and coupling; Butler 2015; Butner, Diamond, and Hicks 2007; Larson and Almeida 1999; Parkinson 2011; Reed, Barnard, and Butler 2015). In this chapter, we will stick to just one term, namely *emotional convergence*. And, although there are many different pathways through which people can come to converge emotionally (see Elfenbein [2014] for a comprehensive discussion of ten possible ways in which two people's affective experiences may become linked), here we will only discuss the two processes that have been most extensively studied, namely *emotional contagion* and *social appraisal*. It should be noted that while discussed separately, these two pathways are not mutually exclusive, and may in fact both contribute to the social context shaping one's emotional experience (Parkinson and Simons 2009; Parkinson 2011).

Emotional contagion has been defined as "the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of an-

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other person and, consequently, to converge emotionally" (Hatfield, Cacioppo, and Rapson 1994). As implied by this definition, one way in which we can come to "catch" another person's emotion, is by mimicking their (facial) emotional expressions (see also Prochazkova and Kret 2017). Yet, simply perceiving someone else's expression and understanding its emotional meaning may already be enough to automatically activate neural regions associated with this emotional experience, leading people to experience the observed emotion without having to make the physical movements oneself (Neumann and Strack 2000; Niedenthal et al. 2010; Parkinson 2011; Semin and Cacioppo 2008; Tamietto et al. 2009). Thus, although emotional mimicry is one of the most important mechanisms underlying emotional contagion, it seems neither necessary nor sufficient to explain its occurrence.

Important for our understanding of emotions in social situations, though, is the finding that the occurrence of emotional mimicry is highly dependent on the extent to which the specific social context is affiliative, because a sense of affiliation motivates people to share each other's perspective (Hess and Fischer 2013, 2014). Indeed, experimental studies have shown that people are more inclined to mimic the emotional expressions of those who are portrayed as "good" characters compared to "bad" characters (Likowski et al. 2008), and of political leaders whom they have positive attitudes towards (McHugo, Lanzetta, and Bush 1991), or share a similar political orientation with (Bourgeois and Hess 2008). Furthermore, they have shown that people are *less* likely to mimic the other when they are put in a situation that promotes competitive behavior, or are led to believe that the other person is likely to be competitive rather than cooperative (Likowski et al. 2011; Weyers et al. 2009; Lanzetta and Englis 1989). Finally, it has been shown that people mimic those more whom they are friends with (Fischer, Becker, and Veenstra 2012) or perceive as belonging to their in-group (Bourgeois and Hess 2008; Fischer et al. 2011). Thus, the affiliative nature and closeness of people's interaction and relationship strongly impacts the motivation to mimic the other and thereby potentially converge emotionally (see also Elfenbein 2014).

Another powerful route to emotional convergence occurs through social appraisals, which happen when we not only evaluate (i.e., "appraise") the emotional event itself, but also take other people's evaluations of the situation into account such that these become an integral part of our emotional reaction (Manstead and Fischer 2001). In other words, we speak of social appraisal when other people's emotions change the way we ourselves evaluate and interpret a current situation – something that usually makes us feel the same way about the situation as the other person does and hence instigates emotional convergence. In contrast to the quite automatic and unconscious process of mimicking others' facial expressions, social appraisal involves an inference about the meaning of the situation (Manstead and Fischer 2001; Parkinson and Simons 2009). Thus, instead of merely "catching" fear by unconsciously mimicking a fearful face, social appraisal implies that we use the other's fearful expression to infer that the *situation* must be threatening. We make an appraisal based on social information, thereby taking a more cognitive route towards emotional convergence.

Importantly, and just like for emotional mimicry and contagion, the occurrence of social appraisal processes is highly dependent on the social context in which they occur. Again, the closer people are, the more they attend to their interaction partner's emotions and take these cues seriously in construing their own evaluation of the situation (Manstead

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and Fischer 2001; Parkinson 2011). Furthermore, the mere imagined presence of close others has been found to change people's take on particular emotional situations (Fischer et al. 2003; Manstead and Fischer 2001). In one study, participants were asked to imagine being in several different emotional situations, either alone, with a stranger or with a friend (Jakobs, Manstead, and Fischer 1996). Regardless of whether this situation evoked sadness, fear, anger or disgust, participants felt better able to handle the situation when they were in the (imagined) presence of a friend as compared to a stranger. Thus, the closer others are, the more they impact how people interpret and hence experience a situation – they impact how people give meaning to the situation itself as well as how they estimate their capacity to deal with it.

Finally, it has been found that the more people interact with one another over time, the more emotionally similar they may become. Specifically, studies on college roommates, members of sports teams and romantic partners have shown that people grow emotionally similar over time, such that they come to react in similar emotional ways even when they are not interacting with one another (thereby excluding the direct influence of contagion and mimicry; e.g., Anderson, Keltner, and John 2003; Totterdell 2001). This suggests that the more frequently people interact with one another, the more likely they are to develop similar ways of appraising the world, which they apply even in each other's absence. One potential explanation for this phenomenon is that the closer people are to one another, the more likely they are to share emotional events that happen to them (Rimé 2009), creating more opportunities to interpret, clarify and reevaluate the experience together – a process that may lead people to adopt similar appraisals in future events (Pasupathi 2001) and, as such, fosters emotional convergence.

As may be apparent from the above, communication is crucial for emotional convergence to occur: To be influenced by another's emotions – whether through contagion or social appraisal – people need to be able to accurately perceive and understand his or her emotions. This is, however, not always a given, as emotional expressions in the face, voice and body do not constitute a universal invariant language. In fact, it has been shown that individuals across different socio-cultural contexts tend to use subtly different "dialects" to nonverbally express their emotions (Elfenbein et al. 2007; Elfenbein 2013). This may make it harder for members of different cultural groups to accurately recognize each other's emotions (Elfenbein and Ambady 2002). And, mimicking emotional cues from a different dialect might lead to a different emotional experience if the cue does not represent the same emotional meaning in one's own dialect (Elfenbein 2014). In addition, studies have shown that non-native speakers of a particular language (e.g., English) have a harder time correctly identifying an expresser's emotion when they have to rely on vocal and verbal channels only (Dewaele and Lorette 2018), and that their capacity to correctly do so is a function of their language proficiency (Graham, Hamblin, and Feldstein 2001; Lorette and Dewaele 2015, 2018; Rintell 1984). Together, these findings thus suggest that to the extent that people's interaction partners have a *different* way of expressing emotions, they will be less likely to either mimic them or accurately infer their appraisal of the situation, implying that people are more likely to converge emotionally with those who share their socio-cultural context (see also Section 3.1).

Another communicative factor that impacts the degree of emotional convergence concerns the explicitness of social appraisals. A person's interaction partner may not only

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explicitly *tell* how he or she evaluates a given situation, but may also express non-verbal emotional responses (e.g., in the voice or face) one can use to *infer* what they think. And, even when no emotional cues (or interaction partner) are present in the moment, people can still simply *imagine* how others would react to the situation at hand. While all these different ways may influence people's emotional experience, studies have shown, however, that the explicit presence of others has a stronger effect on people's emotional expressions than the imagined presence (see Fischer et al. 2003). Furthermore, it has been found that the more expressive others are, the more inclined people are to take over their emotions and act accordingly (Bruder et al. 2012; Forrest, Manstead, and Fischer 1999; Parkinson, Phiri, and Simons 2012). Thus, the more explicitly people's interaction partners convey their appraisals of a situation – whether they do so through verbal or non-verbal emotional expressions – the more likely people are to adopt their appraisals, and hence, the more their emotional experiences are shaped by others in the social situation.

In summary, our social relations shape the extent to which we are impacted by others' emotional states. The closeness of our relationship – whether this is because we like them more, feel more similar to them, or feel closer to them – enhances the motivation as well as the ability to converge emotionally. The closer we feel to others, the more likely we are to mimic their emotional expressions and appraise the situation the way they do, such that we come to feel the same emotions.

2.2 Emotion regulation

Whenever people experience emotions in social relationships, there may be a need for emotion regulation – that is, to deliberately up- or down-regulate the emotional experience or expression. Indeed, since expressing one's emotions is a way of communicating one's needs, desires, and goals to others (e.g., see Fridlund 1994; Keltner and Haidt 1999; Van Kleef et al. 2011), the way people do so may depend on the role of the other (e.g., is (s)he the target of my emotion?), the relationship with the other (e.g., is (s)he a stranger or a friend?), the anticipated outcomes of the expression (e.g., will my emotion be met with support?) or a combination of these factors (e.g., see Keltner and Haidt 1999; Parkinson 2005; Van Kleef et al. 2011). In addition to guiding how a person regulates her own emotions, interaction partners may also play an *active* role in shaping people's emotional experiences and expressions, such as when they aim to soothe, calm down or cheer up the one they are interacting with. Thus, people's emotion regulation may be both indirectly and directly shaped by the social relationships they engage in.

Firstly, the nature of people's relationship may motivate them to actively up- or down-regulate their own emotions, such that the level of expression is considered appropriate within the specific relationship context and thus adheres to the prevailing social norms (Shields 2005; Van Kleef 2016). For instance, when people are close to their interaction partners and expect them to respond in a supportive way, they are more willing to express emotions like sadness that make them appear vulnerable (Clark and Finkel 2005; Von Culin, Hirsch, and Clark 2017; Clark, Fitness, and Brisette 2001). Yet, when in the presence of

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non-close others, such as their boss, people prefer to suppress their emotions, presumably because they are concerned with making a good impression and avoiding negative consequences (Martini 2011; Tang and Huang 2019). In a similar vein, people more overtly express their anger towards others who have a lower (rather than higher) status than themselves (Kuppens, Van Mechelen, and Meulders 2004), as well as when in competitive (rather than cooperative) situations (Côté and Hideg 2011; Van Kleef, De Dreu, and Manstead 2010; Van Kleef et al. 2011) – contexts in which the expression of aggressive, domineering emotions is more appropriate and may be functional (Van Kleef et al. 2010). Together, these studies demonstrate how social relationship norms shape the way people regulate their emotional expressions.

Secondly, people may up- or down-regulate their emotions depending on their own needs, such as when they engage in social sharing – i.e., the act of sharing one's emotional state with others (Rimé 2009). Research shows that people may share their emotions to fulfill their needs for either emotional support (in which the other provides comfort, care and validation), or cognitive support (in which the other helps one to take a different perspective on the situation; Rimé 2009). In this realm, it has been found that people strategically (albeit largely unconsciously) seek out those conversation partners whom they think will be able to fulfill their specific support need (Cheung, Gardner, and Anderson 2015), as well as communicate their emotions differently depending on the type of support they are looking for (Pauw et al. 2019a; Trees 2005). Specifically, our studies revealed that sharers emphasized their feelings more when seeking emotional support, yet focused more on features of the upsetting situation when desiring the listener to provide cognitive support (Pauw et al. 2019a). Likewise, a study in which romantic couples reflected on typical daily interactions in which they share their worries with one another, women reported to regulate their emotions differently depending on the support they sought from their partner. In particular, when women perceived their partner to portray the situation as less worrisome, they more often up-regulated their expression of worry in an attempt to alert their partner of the seriousness of the problem (Parkinson, Simons, and Niven 2016). In sum, these studies show that the way people express their emotions is shaped by the responses they desire from their conversational partner.

A third, more pro-social motive for regulating one's own emotions, is to regulate *others'* feelings. For instance, people may down-regulate the expression of their negative emotional experiences, such as crying when being sad, to avoid distress in their interaction partner (Simons et al. 2013). Likewise, they may up-regulate the expression of positive emotions when their interaction partner shares a positive experience, because this may help fulfill the other's need to relive the event and savor the positive emotional experience (Duprez et al. 2014; Gable and Reis 2010; Le and Impett 2016). In doing so, and thus in constructively and supportively responding to their interaction partner's social sharing, people fulfill others' needs and thereby promote closeness and relationship satisfaction (Donato et al. 2014; Gable, Gonzaga, and Strachman 2006; Gable et al. 2004; Gable and Reis 2010). Yet, these attempts may also backfire: When people experience their regulated expressions as inauthentic, they report having worse relational and personal outcomes (Impett et al. 2012; Stroebe et al. 2013; Le and Impett 2016) – a finding that is only true for people construing themselves as independent from others and absent among people construing themselves

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as interdependent (Le and Impett, 2013; see also Section 3.2). Thus, although not always being that beneficial, people up- or down-regulate their own emotional expressions to fulfill the emotional needs of their interaction partners.

Finally, and rather than by altering their own emotional expressions, people may also directly try to regulate others' emotions. This is especially evident when interaction partners share negative emotional experiences and hence seek out support. In these situations, one may respond in many different ways, such as by providing emotional support or cognitive support (i.e., offering a different perspective on the situation; Rimé 2009), or trying to disengage one's interaction partner from the emotional situation, which one could do by trying to distract them or encouraging them to suppress their emotions (Gross 1998). Alternatively, one may provide more problem-focused support, by for example giving advice or helping the other solve the problem. Which of these different forms of support people engage in may be shaped by the context (e.g., is it an inconvenient moment to be upset?; Pauw et al. 2019b), the type of problem (e.g., can something be done about the situation?; Cutrona 1990; Cutrona and Russell 1990; Horowitz et al. 2001), but importantly, also by people's relationship history with the interaction partner. The closer people are, the more accumulated knowledge they have regarding each other's regulatory preferences, goals, and past experiences, and thus the better they are able to recognize the sharer's emotions and support needs (Ickes and Hodges 2013; López-Pérez, Sanchez, and Parkinson 2017; Wilhelm and Perrez 2004). For example, people may know from prior experience that every time they tried to solve the problem of their interaction partner, or offered a more positive perspective on the situation, it backfired, leaving their partner only more sad or frustrated. Hence, the way in which people attempt to regulate others' emotions is not only shaped by the emotional situation, but also by their relationship history and outlook.

A key factor in these processes of emotional co-regulation in social relationships and especially in contexts of social sharing, is the extent to which people can effectively *communicate* about their emotions and needs. Indeed, people need to be willing and able to express their emotions as well as their needs to allow others to effectively interpret them and offer the support their interaction partner is seeking (Van Kleef 2016). These communicative attempts may take different forms: People may verbally or nonverbally seek support in either direct ways, such as by sharing the problem or crying, or in indirect ways, such as by complaining or sighing. Yet, it has been argued that the more explicitly sharers communicate their support needs, the easier it is for others to respond appropriately (see Barbee and Cunningham 1995). One of our own recent studies on social sharing among previously unacquainted same-sex interaction partners showed that listeners tended to provide support that was attuned to the sharer's fluctuating support needs throughout their conversation (Pauw et al. under revision). This suggests that sharers are able to at least somewhat effectively communicate their needs and feelings – either through varying the emotional intensity of their expressed emotions (Pauw et al. 2019a, under revision) or through differentially expressing their emotions when seeking problem-focused support (e.g., "I don't know what to do") versus emotional support (e.g., "I feel awful"; Horowitz et al. 2001; Pauw et al. 2019a). Together, these studies suggest that effective communication of emotions and needs importantly shapes whether emotional co-regulation will be considered helpful or appropriate.

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In sum, the discussion above reveals how emotion regulation is shaped by our social relationships. By expressing our emotions, we communicate our needs and goals. Yet, depending on the specific social situation, our relationship histories and outlooks, as well as our own needs for social support, we may up- or down-regulate our emotional expressions. In turn, the other's response impacts our emotional experience, expression and subsequent regulation. Hence, our emotions are closely intertwined with the relationship context in which they occur: The nature of our relationships shapes our willingness to express our emotions, as well the motivation and ability to attend to, interpret and appropriately respond to the other's emotions.

3 Emotions in socio-cultural contexts

3.1 Emotional experience

Another crucial ingredient of *social* situations that goes beyond people's specific interaction partners and relationship histories or outlooks, is the meaning system on how to be a "good person" and have "good relationships" that is shared with their (imaginary) interaction partners. As outlined in the introduction of this chapter, there are systematic differences in these so-called *models of self and relating* across different socio-cultural contexts (e.g., Markus and Kitayama 1991). And since these models constitute the backdrop against which people make meaning and act upon the world, they importantly shape people's appraisals and action tendencies, and hence, their emotional experiences.

Over the past few decades, research has accumulated to document the existence of a "cultural logic" underlying differences in emotional experience (see, e.g., De Leersnyder, Boiger, and Mesquita 2021; Mesquita, De Leersnyder, and Boiger 2016; Tsai and Clobert 2019). Specifically, emotions that align with a socio-cultural context's ideal ways of being a good person and relating to others are found to be more valued and prevalent than emotions that do not (e.g., Markus and Kitayama 1994; Mesquita 2003; Tsai, Knutson, and Fung 2006). Exemplary evidence comes from two studies that compared the frequencies and intensities with which European American and Japanese college students experienced a range of *autonomy-promoting* and *relatedness-promoting* emotions throughout their daily lives (Study 1) and in response to standardized situations (Study 2; Kitayama, Mesquita, and Karasawa 2006). Autonomy-promoting emotions (also called socially *disengaging* emotions) like pride, excitement, anger, and irritation, highlight how a person is autonomous, successful, unique and standing up for their own beliefs, preferences and boundaries. Relatedness-promoting emotions (also called socially *engaging* emotions), like friendly feelings, respect, shame and indebtedness, highlight how a person cares for being related to others and for maintaining social harmony and hierarchy (for further evidence on this dimension, see De Leersnyder et al. 2018; Kitayama, Markus, and Kurokawa 2000). Supporting the notion of a cultural logic, both studies found that participants in US middle-class contexts – that are characterized by an independent model of self and relating – were more likely to experience autonomy-promoting than relatedness-promoting emotions. The opposite was true for participants in Japanese contexts that are characterized by an interde-

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pendent model of self and relating. As such, these studies support the notion that emotions that are in line with the cultural model are more prevalent than emotions that are not.

In further support of the idea that this cultural logic to emotion is due to differences in shared meaning systems (rather than group differences in genetic make-up or personality, for instance), studies have shown that the emotional lives of immigrant minorities and biculturals are contingent upon the extent to which they engage in their new socio-cultural context's meanings and practices. For example, in one series of studies we showed how immigrant minorities' emotional patterns converged to those that are typical for the new culture's majority members. To measure this convergence, we asked both cultural majority members and immigrant minorities to report on a specific type of situation from their own daily life and compared each individual's pattern of emotional experience to the corresponding *average* emotional pattern of the majority culture. Then, we compared the different groups' indices of *emotional fit with the typical majority patterns*. We found that whereas majority members had the highest fit scores, those of immigrant minorities increased with each generation, such that first-generation minorities had the lowest fit with the typical majority emotional patterns and those of third-generation minorities were as high as those of majority members themselves (De Leersnyder, Mesquita, and Kim 2011; Jasini et al. 2018). Moreover, we found that the more individual minorities had been exposed to the majority group and interacted with majority members, the higher their emotional fit. This thus suggests that by engaging in a new socio-cultural context's meanings and practices, immigrant minorities' emotions may come to be aligned with those that are typical in the majority cultural group.

In addition, studies on biculturals – i.e., minorities who have internalized two cultures' meaning systems – have shown that not only continuous engagement in a particular meaning system is associated with changes in emotional patterns, but also that momentary switches between different socio-cultural contexts are associated with systematic switches between emotional patterns. Concretely, a study with East Asian Canadians showed that the association between biculturals' momentary positive and negative mood (reported multiple times a day) was systematically linked to their socio-cultural context of interaction (Perunovic, Heller, and Rafaeli 2007). After having interacted in English or having identified with mainstream Canadian contexts, biculturals' positive and negative moods were negatively correlated with one another (implying that they either felt good or bad in the moment), which is a pattern of emotion commonly observed in European American contexts (Bagozzi, Wong, and Yi 1999). Yet, after having interacted in an Asian language or having identified with Asian contexts, biculturals' positive and negative moods were *not* associated at all (implying they could feel good and bad at the same time), which is a pattern of emotion that is typical for East Asian cultural contexts (Bagozzi et al. 1999). Thus, biculturals' emotional experiences tend to be in line with their specific socio-cultural context of interaction, thereby providing further support for the idea that not (only) one's personality or genetic make-up, but (also) one's engagement in a context's meanings and practices instigates the observed cultural logic underlying differences in emotion.

One potential explanation for this cultural logic is that those appraisals and action tendencies (i.e., components of emotion) that are in line with the context's ideals on how to be a good person or to have good relationships, are more "attended to" or "selected"

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than those that are not. Indeed, it has been found that European American and Japanese participants systematically reported different appraisals and action tendencies when confronted with similar types of situations. Specifically, when they were asked to recount offensive situations from their own daily life (Mesquita et al. 2006), about 40–56 % of the Japanese reported to have taken the perspective of a third person and sympathized with the offender – a practice that is in line with the Japanese interdependent model of self and relationships, and that encourages them to maintain social harmony (Cohen and Gunz 2002; Heine 2003). In contrast, only 0–5 % of the European American participants reported that they did so, suggesting they were more likely to take a first-person perspective on the situation – something that is promoted by their independent model of self and that may protect their self-esteem. Likewise, studies on how people from independent versus interdependent cultural contexts tend to explain success versus failure situations yielded similar differences in perspective-taking appraisals (Imada and Ellsworth 2011). Thus, broader shared meaning systems may guide people's attention and meaning-making processes (i.e., appraisals and action tendencies), thereby promoting different types of emotional experiences across different socio-cultural contexts.

This idea that different socio-cultural contexts promote different ways of making meaning and thereby promote certain emotional experiences above others, is further corroborated by a recent social experiment from our own lab (De Leersnyder and Mesquita submitted; Study 2). In this study, we randomly assigned Turkish Belgian biculturals to either a Belgian autonomy-promoting context (i.e., the Belgian community center in the village) or to a Turkish relatedness and community-promoting context (i.e., a room attached to the Turkish mosque of the village). In each setting, biculturals interacted in the context's dominant language (i.e., Dutch vs. Turkish) with a same-gender confederate whose cultural background matched the context (i.e., Belgian vs. Turkish). All confederates enacted a script that comprised the same set of pre-tested negative emotional situations (De Leersnyder and Mesquita submitted; Study 1) that were either clear-cut violations of autonomy or community, or were ambiguous in that they could equally well be interpreted as a violation of autonomy or community concerns. After videotaping and coding biculturals' emotional behavior in response to these negative situations, we found that Turkish Belgians reacted with different emotional patterns to these same ambiguous situations depending on their context of interaction. When interacting in the Belgian context, biculturals reacted with an emotional pattern that corresponds with the one emerging in clear-cut autonomy violations (more anger than contempt), suggesting they interpreted the ambiguous situation as an autonomy violation. Yet, when interacting in the Turkish context, they showed an emotional pattern that resembled the one observed in clear-cut community violations (equal anger and contempt). Thus, to make sense of these rather ambiguous situations, biculturals tended to rely on *those* concerns that were salient in their socio-cultural context, resulting in different emotional patterns depending on their context of interaction.

This latter process of switching between different meaning systems is referred to as *frame switching* (or code switching) and highlights the important role that language may play in accessing different meaning systems. For instance, when Greek-English and English-Greek bilinguals' were presented with a story about a young professional who neglected both his girlfriend and his elderly mother because of work pressure, they responded

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differently to it depending on the language it was read to them (Panayiotou 2004). When the story was read in English and telling about Andy, bilinguals were much more tolerant of his behavior than when it was read in Greek and telling about Andreas. This suggests that the different languages in which they heard and processed the story highlighted different meaning systems on how to be a good person and how to relate to others, with Greek cultural models being more interdependent than English/US models. Relatedly, qualitative studies have highlighted how bilinguals often prefer to express their emotions in a language that is associated with a cultural meaning system that is more acceptant of these emotions (e.g., Dewaele 2010b). Ryoko, a Japanese participant who returned to Japan after having lived in the US, expressed it as follows: "I tend to use English when I am angry, Japanese when I'm hurt or sad, both when I am happy or excited [...]. I guess I like the sound of the swearing words since I heard it so many times during my stay in the US. This swearing doesn't happen so often in Japan" (Dewaele 2010a: 120). Thus, and as may be clear from these studies, language may serve as a key into a particular meaning system. Yet, as language itself is so much imbued with cultural connotations (see also Lorette and Dewaele 2015; Robinson and Altarriba 2014), it is quite impossible to disentangle the role of language in our experience from that of shared meanings and practices.

Within emotion psychology, however, there are ongoing debates on the exact role of language in the shaping of emotional experience (see e.g., Brooks et al. 2016; Lindquist, Gendron, and Satpute 2016). Without going into detail, we can say that on the one hand, studies have shown that in the absence of accessible emotion concepts and words, the perception and meaning of both one's own and another's affective experiences are more ambiguous (Gendron et al. 2012). On the other hand, studies on culture-specific emotion concepts such as the Japanese concept of *amae* – i.e., the positive feeling when you know another person will indulge your inappropriate request because of your close, loving relationship – have documented that even in the absence of a specific English word, US participants can recognize this feeling and its associated situations (Niiya, Ellsworth, and Yamaguchi 2006). Yet, in contrast to the Japanese, US participants associated *amae* with less positive appraisals and with a heightened sensitivity for maintaining control. A nuanced take on the evidence on both sides would then propose that the availability of emotion words such as *amae*, *Schadenfreude* or *saudade*, may help us *label*, and perhaps recognize, categorize and communicate our experiences better, but not that the words we have necessarily *define* our experience.

In sum, there is robust evidence for a cultural logic to people's emotional experience: Emotions, emotional patterns and emotion components that are in line with a culture's models of self and relationships are experienced most frequently and intensely. This is not only true in monoculturals: Immigrant minorities may come to acquire their new majority culture's emotional patterns, and biculturals may actually switch between different patterns depending on the context of their interaction. However, since language and cultural meanings are so closely intertwined, it remains unknown what the exact role is of language in both the acquisition and the activation of different emotional patterns.

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3.2 Emotion regulation

As discussed above (Section 2.2), people tend to regulate their emotions according to the social relationships they are engaging in. Recognizing that these relationships are embedded in socio-cultural contexts that are imbued with shared meanings and practices may help us better understand the *goals* towards which people regulate their own and others' emotions. Specifically, it is likely that people engage in emotion regulation strategies to consciously or unconsciously align emotions with the broader socio-cultural context's ideals of what it means to be a good person and have good relationships with others. Below, we discuss evidence for this idea by presenting studies in which people tend to up-regulate culturally valued emotions or down-regulate culturally condemned emotions, either in themselves or in interaction partners, and either in an explicit or rather implicit way (see also De Leersnyder 2019; De Leersnyder, Boiger, and Mesquita 2013).

Which emotions are desired versus condemned in a socio-cultural context can be understood from the same cultural logic as we outlined above for emotional experience: Emotions that help a person embody and realize their context's prevalent model of self and relating are more likely to be valued and thus sought after, whereas those emotions that hamper this realization are more likely to be discarded and avoided. Emotions that help a person to influence others, take control, stand out and, as such, realize the cultural tasks associated with the independent model of self (Karasawa et al. 2009) are the above discussed autonomy-promoting emotions (De Leersnyder et al. 2018) and High Arousal Positive (HAP) emotions, such as excitement (Tsai et al. 2007). Emotions that help a person to adjust to others, fit in, and maintain closeness and relational harmony and, as such, realize the cultural tasks associated with the interdependent model of self (Kitayama et al. 2009) are the above discussed relatedness-promoting emotions (De Leersnyder et al. 2018) and Low Arousal Positive (LAP) emotions, such as feeling calm (Tsai et al. 2007). Supporting the cultural logic idea, it has been found that European Americans value HAP much more than LAP emotions, whereas the opposite is true for Hong Kong Chinese (Tsai et al. 2006). Moreover, it has been demonstrated that people also behave in ways to achieve their culturally valued states: European Americans seek out more activities that may actually make them feel the HAP emotions, such as listening to lively, upbeat music and going for a run, whereas Hong Kong Chinese tend to seek out activities that may instigate LAP emotions, such as listening to relaxing music and going for a walk (Hogan et al. 2015; Tsai, Chim, and Sims 2015). As such, people are actively seeking to experience their culturally shared ideal emotions.

In addition to regulating their emotions by seeking out specific situations, it has been shown that people engage in strategies to up-regulate versus down-regulate culturally valued versus discarded emotions. Specifically, a series of studies by Miyamoto and Ma (2011) found that although European Americans, Asians and Asian Americans generally want and actively attempt to savor their positive emotional experiences, this tendency was much weaker among Asians and Asian Americans – a finding that could be explained from participants' (Taoist-inspired) belief that one should find a balance between positive and negative emotions. In addition, our own study on frame switching in Turkish Belgians (De Leersnyder and Mesquita submitted) showed that biculturals engaged in significantly more

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attempts to suppress (and thus down-regulate) their negative emotional expressions when engaging in the Turkish relatedness-promoting context, as compared to the Belgian autonomy-promoting context that is perhaps more accepting of these emotions. Finally, a large-scale study linked country levels of independence (i.e., individualism) to the extent to which people attempted to downplay and suppress their emotions (Matsumoto et al. 2008). The results showed that higher levels of independence were associated with more expression of emotion, and thus that higher levels of interdependence were associated with more suppression of emotion. Yet, this relationship was fully carried by the emotions "happiness" and "surprise". For sadness, an opposite trending relationship was observed, such that higher levels of independence were actually associated with less sadness. This suggests that people tend to express and up-regulate those emotions that are valued (e.g., HAP in independent contexts) and suppress and down-regulate those that are not (e.g., HAP in interdependent contexts).

However, people do not regulate their emotions only by themselves; other people are often actively trying to shape a person's emotions to be in line with what is considered to be appropriate, and hence, what is in line with the cultural context's shared meanings and practices. This process starts in early infancy and can, for instance, take the form of parents paying more versus less attention to those states they consider appropriate versus inappropriate, respectively. An exemplary study in this regard compared how parents in an independent cultural context like Germany versus interdependent contexts like Japan and India respond to situations in which their toddlers experience distress after a mishap (Trommsdorff and Friedlmeier 2010; Trommsdorff and Friedlmeier 1993; Trommsdorff 2006). Whereas German mothers tended to focus on their babies' distress, Japanese and Indian mothers tended to ignore their babies' negative emotions. As such, German mothers communicated to their toddlers that mishaps provide good reasons to experience and express negative emotions as these situations of failure may harm self-esteem. In contrast, Japanese and Indian mothers rather challenged their babies' interpretation of a mishap as distressful, perhaps because personal mishaps do not threaten social relationships and are more likely to be construed as opportunities for further self-improvement. By ignoring versus paying attention to their children's distress in this situation, parents thus regulate their children's emotions to be in line with what is considered culturally appropriate.

In addition to this rather implicit way of regulating their children's emotions, parents also engage in more explicit strategies to do so. Indeed, whenever parents and children engage in conversations about everyday events, parents not only tend to select which events to reminisce and elaborate upon, but also adopt a particular conversational style to highlight certain aspects of the situation and to provide children with the opportunity to (re-)experience the culturally valued emotions (e.g., Fung 1999; Miller et al. 1997; Ross and Wang 2010). Specifically, studies by Wang and colleagues have documented that European American mothers tend to engage their children in discussions about either personal or non-social events, and use a highly elaborative conversational style that highlights the child's own role in the emotional event (Wang 2007). In contrast, Chinese mothers tend to pick social events to discuss with their child, emphasize the perspective of others in the conversation and tend to elaborate on the expected appropriate social behavior (Wang 2007). In this way, European American and Chinese mothers encouraged their children to

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come to evaluate daily situations in terms of personal autonomy and independence versus in terms of social harmony, norms, roles and interdependence. As such, they regulated their child's experiences to match their culture's models of self and relating.

Recently, it has been shown that similar processes of emotional co-regulation extend to adult interactions (see also Schoebi et al. 2010; Randall et al. 2011). In one such study, Boiger and colleagues (2019) invited Belgian and Japanese opposite-sex couples in the lab to talk about a real-life relationship conflict (Boiger et al. 2019; the conflict procedure was modeled after Gottman and Levenson [2000]). Afterwards, participants were asked to engage in a video-mediated recall task in which they separately reviewed the recordings of their conflict discussion and had to indicate their emotional experience and action tendencies for every 30-second segment of the video. In analyzing these latter data with techniques from dynamic systems modeling (Hollenstein 2013), it was found that the Japanese versus Belgian couple interactions were characterized by different "attractor" states – i.e., states that are not only recurring during the interaction, but that also "pull" the trajectory of the (couple's) interaction – that could be understood from their respective models of self and relating. For Belgian couples, the attractor states included feelings of mutual annoyance, one-sided feelings of strength and disengagement from the conflict, which all support relationship ideals of maintaining individual autonomy. In contrast, attractor states in Japanese couples included feelings of mutual empathy and embarrassment that reflect and embody relationship ideals of relatedness and interpersonal harmony. Thus, during conflict interactions, romantic partners seem to be (deliberately or not) regulating their emotions in such a way that their most frequently experienced emotional states are those that are culturally valued.

As may be clear from the above, communication plays a crucial role when people regulate each other's emotional states to be in line with their cultural context. This communication can range from subtle, implicit cues, like how much attention is spent on a certain state, to explicit verbal expressions in which people remind each other of what emotions are appropriate ("You have the right to be angry at that man! C'mon, stand up for yourself!"). Yet, communication and language also play a role when people – and, especially multilinguals – attempt to regulate their *own* emotional experiences. Specifically, it has been argued that bilinguals' intensity of emotional experiences and expressions may depend on the language they speak, which implies that they can strategically use different languages to up- or down-regulate their emotions. Concretely, experimental studies on Turkish and Latino immigrants to the US have demonstrated that some emotional phrases like childhood reprimands elicit larger skin-conductance responses when presented in their native language than in English (Harris, Ayçiçeği, and Gleason 2003; Harris, Gleason, and Ayçiçeği 2006) – an effect that was absent though among immigrants who had acquired both languages in childhood (Harris et al. 2006). Moreover, qualitative studies on multilinguals have highlighted that when people use their mother tongue for emotional expressions of love (e.g., saying *Ik hou van jou* 'I love you' in Dutch) and anger (e.g., swearing in Dutch *Godverdomme* 'God damn it'), these may "feel" much more intense than when they use their second language to do so (Dewaele 2008) – an effect that was again weaker for bilinguals who had had many opportunities to use these expressions in their second language (Dewaele 2010). Hence, depending on whether bilinguals aim to process emotional

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experiences in a "more deep" versus "more distant" way, they can strategically choose to communicate in their first (and often more proficient) versus their later-learned (often less proficient) language(s), respectively (Pavlenko 2012).

This insight is not only interesting for how we think about the role of language in emotion, but also has implications in the real world. Firstly, it has been documented that bilinguals often switch to their non-native language to obtain emotional distance when discussing difficult topics in psychotherapy (Altarriba and Santiago-Rivera 1994; Dewaele and Costa 2013; Schrauf 2000), implying that therapists could also strategically make use of a client's multilingual skills to process emotional events in different ways. Secondly, experiments involving mock trials and polygraphs have shown that the skin conductance responses of Latino immigrant minorities to the US did not differ between lies and truth when these participants had to take part in the "trial" in English (Caldwell-Harris, Sanchez, and Nayak 2014). Rather, their skin conductance responses were high and variable, suggesting a stress/anxiety or effort response and implying that extreme caution should be in place when using polygraphs in police interrogations with non-native speakers. Finally, these insights imply that people in inter-cultural interactions or relationships, like intercultural marriages in which they do not share a first language, may be more vulnerable to experience a lack of intimacy and emotional connection, which may lead to frustration and miscommunication (Piller 2002); appraising that this may be due to sharing emotions in one's second language could be a first step in buffering these negative relationship outcomes.

In sum, the ways in which people regulate their own and others' emotions may follow a cultural logic that results in socio-cultural differences in actually experienced emotions (see Section 3.1). Specifically, emotions that allow for the realization of one's culture's models of self and relationships tend to be valued more, sought after and hence up-regulated than emotions that hamper the realization of this model. Most evidence for this insight comes from studies comparing monocultural groups and people in same-culture dyads, yet it would be fascinating to explore if the same principles hold true for biculturals switching between different contexts and for interaction partners who have different cultural backgrounds and, accordingly, different cultural meaning systems. In doing so, we may also gain further insights into the role of language in how people regulate their own and their interaction partners' emotions.

4 Discussion, conclusion and future directions

My emotions are not merely reflective of what is "me" and "mine" – they are shaped by the social relationships in which they occur as well as by the broader socio-cultural context in which these are embedded. As we have shown in this chapter, the emotional experiences of interaction partners may come to converge either in the moment or across time (Section 2.1), and so do the emotions of people who share a particular socio-cultural context's meanings and practices (Section 3.1). Within dyadic social relationships, the major mechanisms that account for this convergence are contagion and social appraisal. Within broader socio-cultural contexts, shared ideals of how to be a good person and how to relate to others promote certain meanings, thereby rendering emotions that match the cultural model more

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frequent and intense. Furthermore, deliberate attempts to regulate one's emotional experiences are equally dependent on the social and cultural contexts they are embedded in, with more close personal relationships allowing for more emotion expression and eliciting more responsive support behaviors (Section 2.2) and with the cultural models guiding the end-goals towards which people regulate their own and others' emotions (Section 3.2). Therefore, understanding people's emotional functioning in social situations implies understanding how they experience and regulate emotions across different social relationships and cultural contexts.

However, some of the distinctions we have made for reasons of clarity in this chapter are more blurry or complex in reality. Firstly, and as may be clear from some of the studies discussed in Section 3, it is quite impossible to disentangle "culture" from the social relationships in which we engage, since most "culture" resides in the ways we interact, communicate and relate to other people – a process also referred to as the *micro-genesis of culture* (see also McIntyre et al. 2004; De Leersnyder, Mesquita, and Boiger 2021). In fact, people tend to acquire a culture's meanings and practices through interactions with parents, caregivers or peers (e.g., in the case of immigrant minorities), and tend to be reminded of them in their everyday interactions with significant others as well as with strangers. As illustrated in the cross-cultural studies on couple interactions (Section 3.2), people's interactions are so much imbued with the meanings that make up the cultural models of self and relating that these interactions may instigate *those* emotional experiences that are in line with the prevalent cultural model (see also Boiger and Mesquita 2012; Mesquita and Boiger 2014). Therefore, we would like to encourage scholars studying emotions in social relationships – even when not comparing across different socio-cultural contexts – to take a cultural lens in designing their hypotheses and interpreting their results.

Secondly, and as may have become evident throughout the chapter, the distinction between emotion generation and emotion regulation is not always that clear. Proponents of such a distinction (e.g., Gross, Sheppes, and Urry 2011) have argued that the difference lies in the *goals* underlying the processes that generate emotions and those that are engaged to modify them, with emotion regulation always having the goal to modify an ongoing or future emotion. Yet, as argued by Mesquita and Frijda (2011), this distinction may only be useful in experimental paradigms usually employed to study emotion regulation (that *instruct* participants to either regulate or not) and obscure the inherently emotional nature of much emotion regulation. Central to this latter argument is that in real life, many situations touch upon multiple concerns at the same time and thus have the potential to elicit multiple emotions. This implies that multiple concerns or goals modulate and regulate each other, and thus that the down-regulation of one emotion is due to the salience of another concern that is simultaneously generating another emotional experience. For example, I may feel relieved in response to the fact that my partner finally comes home, yet my concern for autonomy and expressing my wishes may prevail, leading me to suppress my smile and start arguing about the birthday party instead. As such, emotion regulation is thought to take place to the extent that a situation evokes multiple concerns and according emotions that are contradictory. The relative strength of each of these emotions determines the direction of regulation, yet, as may be clear from the above, the socio-relational and cultural context impacts which concerns and emotions take precedence.

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Two other findings described in this chapter highlight the quite artificial nature of distinguishing between emotion generation and regulation. One is that much emotion regulation occurs *before* we can speak of a full-blown emotional experience (i.e., "antecedent" emotion regulation, Gross and Thompson [2007]; and see De Leersnyder, Boiger, and Mesquita [2013]; Mesquita, De Leersnyder, and Albert [2014] for further elaborations of this argument), such as when seeking out certain situations that may instigate culturally valued emotions (Section 3.2), or when taking one's interaction partner's appraisal of the situation into account (Section 2.1). In these situations, people are not only regulating their current affective state, but also generating new ones, thereby blurring the distinction between the two. Another finding that speaks to this issue is the observation that most (if not all) instances of emotional experience and regulation in dyadic relationships are best understood as dynamically changing bidirectional processes (Butler 2011, 2015; Schoebi and Randall 2015). Indeed, by their own emotions, partners may continuously shape each other's emotions: For example, studies on healthy couple interactions have shown that when one partner's emotions start to deviate from their baseline (e.g., she becomes sad), the other partner's emotions may push or pull her back to her habitual baseline, thereby ultimately contributing to emotional stability for both partners (e.g., Butler and Randall 2013; Schoebi and Randall 2015). Likewise, the experimental studies on how one partner's worry is linked to the other's motivation to down-regulate it (Parkinson, Simons, and Niven 2016; Section 2.2) highlight how emotional experience and regulation feed back into one another. Although there is thus some initial evidence, future studies may aim to further illuminate *how* emotional experience and regulation may continuously impact one another, both within an individual and in a dyad.

Finally, we have limited our chapter to reviewing how emotions are shaped by social relationships and broader socio-cultural contexts, while in reality, emotions may also shape the course of social relationships as well as cultural contexts' meanings and practices. In fact, the degree of emotional convergence – or at least the *feeling* of emotional convergence – has been found to be associated with greater well-being and positive relational outcomes such as increased relationship quality and satisfaction (Anderson et al. 2003; Cwir et al. 2011; Gonzaga, Campos, and Bradbury 2007; Sels et al. 2020; Van Der Schalk et al. 2011; but for some criticisms, see Gonzaga et al. 2010; Segrin 2004; Sels et al. 2019; Sels et al. 2016). For instance, when roommates or romantic partners showed greater emotional convergence in how they reacted to a third external party or situation, they were more likely to like each other and stay friends/romantic partners six months later (Anderson et al. 2003). Likewise, our studies on monoculturals' emotional fit with their own culture's typical pattern of emotion showed that higher fit was associated with greater relational well-being (De Leersnyder, Kim, and Mesquita 2015), while our studies with immigrant minority youth indicated that minorities' higher fit with the typical majority emotional patterns was associated with having more majority friends one year later (Jasini et al. in preparation). Yet, when emotional convergence in romantic dyads was based on negative, reactive emotions towards each other (e.g., anger in response to anger), it was associated with worse relationship outcomes (see Butler 2015; Randal et al. 2015; Reed et al. 2013; and Saxbe and Repetti 2010). Thus, emotional convergence may not only be shaped by, but also be shaping our social relationships.

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In addition, the quality of people's relationships may also be shaped by the way in which they express and regulate their emotions. Indirect evidence for this notion comes from empirical work on the suppression of emotions, demonstrating that when people suppress their emotions, they deprive others the opportunity to respond appropriately and thereby disrupt the social relationship (Van Kleef 2016). A striking illustration comes from an experimental study in which previously unacquainted women discussed an upsetting movie that they just watched (Butler et al. 2003). In some of these dyads, one member was instructed to suppress their emotional expressions, whereas in other dyads, both members were allowed to respond naturally. Participants who had a conversational partner that was instructed to suppress their emotional expressions experienced more stress, liked their partner less and were less interested in becoming friends, as compared to those who interacted with someone who was allowed to freely express their emotions. Similarly, a meta-analysis showed that greater suppression of one's emotions is associated with the experience of more negative first impressions, lower social support, lower social relationship satisfaction and quality, and poorer romantic relationship quality (Chervonsky and Hunt 2017). However, caution should be used when aiming to generalize these results as most of the studies in this meta-analysis included samples of Western middle-class (and hence independent) participants, while studies have shown that emotional suppression in interdependent cultural contexts had positive consequences for both psychological well-being (Cheung and Park 2010; Soto et al. 2011) and relationship satisfaction (Le and Impett 2013). Thus, to the extent that emotions are perceived as appropriate or normative, expressing one's emotions to others may promote intimacy, because it provokes reciprocal self-disclosure and elicits increased feelings of liking, closeness and similarity in the receiver (Clark et al. 2001; Gable et al. 2004; Graham et al. 2008; Sprecher, Treger, and Wondra 2013; Sprecher et al. 2013), which may improve the quality of people's social relationships.

Last but not least, emotional experience and regulation may also shape the meanings and practices that are common and shared in a particular socio-cultural context. Although less well-studied than how emotions shape relationships, this process becomes evident in parental socialization practices. Parents not only socialize which emotions their children should experience, but also use emotional experiences to socialize their children about what they should value and care for and how they should evaluate the world – a process that has been coined *Affective Social Learning* (Dukes and Clement 2019). For instance, and as discussed in Section 3.2, there are cultural differences in the extent to which German versus Indian and Japanese parents pay attention to versus ignore their toddlers' distress in reaction to personal mishaps (Trommsdorff 2006). In doing so, parents not only communicate which emotions are appropriate in the situation, but also teach their child that this type of situation is not important, hence using emotions (or a lack thereof) to instigate and perpetuate their culture's meanings and practices in the next generation (see also De Leersnyder 2019). Future studies could aim to shed further light on how the interplay between emotion and communication in interactions shapes the emergence of a shared cultural meaning system.

In conclusion of this chapter, we can thus say that to understand emotions in social situations, we must understand in which social relationships and socio-cultural contexts these are embedded. As we have shown, both our emotional experiences and regulation

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attempts are importantly shaped by the specific interactions, relationship histories and outlooks as well as socio-cultural contexts in which they occur. In turn, emotions are importantly shaping the course of our interactions and relationships as well as which meanings and practices – and hence which "culture" – we come to share with one another. In all these processes, communication and language play an important, yet sometimes still unknown, role. It is our sincere hope that scholars from social sciences, including applied linguistics, sociology and psychology, may take these insights as a starting point to further develop a multidisciplinary context-sensitive science of emotion research.

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Francesca Forlè

40 Emotion and intersubjectivity

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3 Simulation-theory of mind
4 The direct perception account
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Abstract: In this chapter, I will examine the phenomenon of understanding the affective states of others in intersubjective relations. I will do so dealing with the more general contemporary debate on social cognition, which is the debate on our ability to understand others and to interpret, explain and predict their behavior in mentalistic terms – that is, for instance, in terms of intentions, beliefs, emotions or desires. I will present three main theoretical proposals in the field, i.e. the theory-theory of mind, the simulation-theory of mind and the direct perception account. I will present the main theses of the three theories and some of the different theoretical versions of each one. In doing so, I will try to outline how these theories account for our ability to understand the affective states (such as emotions, moods or feelings) of others.

1 Introduction

Let us imagine that we see a friend of ours exulting because her favorite volleyball team has just won the gold medal in an international competition. Let us also suppose that we see another friend blushing and trying to hide himself from others after publicly saying something. Let us think now of the case in which we see a son crying at the funeral of his mother.

What are we experiencing in these cases? Our common intuition is that in the first case we see our friend rejoicing for her favorite team's success, in the second case we see our friend feeling ashamed for what he has just said, and lastly, in the third case, we see a son who is sad for the death of his mother. In other terms, it seems to us that we somehow experience other people's affective states in and through what they do. However, is this possible? What kind of experience is this?

One of the main issues that has characterized the contemporary debate on these themes is whether, and how, we can have access to other people's affective states (and, more generally, to the minds of others) if we are confronted only with their bodies. Indeed, a strong intuition is that we can have quite a straightforward access to our affective (and mental) states since they characterize our own lived experience of ourselves, to which we

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have a specific access from the first-person perspective. Such an intuition does not necessarily imply that we are completely transparent to ourselves and that we never lie to ourselves about our actual affective or mental states (see on this point Nisbett and Wilson [1977]). It just refers to the idea that we have a very specific internal and quite direct access to our experiences since we live them "from within" – however, some authors suggest that even this kind of access is not as direct as it may seem and that it involves inferential routines like our understanding of others (see on this point Leslie [1987]). The other side of the mentioned intuition is that we cannot have access to other people's affective (and mental) life in the same way we have access to our own minds, since we cannot have a first-person perspective on the minds of others. Others can be known by us only through the medium of their bodies, their facial and bodily expressions, their gestures, their linguistic reports about their experiences. However, what kind of access is this, and how is it accomplished, since it seems to be mediated by the bodies and various expressions of others? Is our experience of others more like the perceptual experience of an object such as a mountain or a car, or is it a more complex phenomenon involving inferences, for instance? What are the specific mechanisms that lie at the basis of our ability to understand others and have access to their mental life? All these questions are crucial to the contemporary philosophical and psychological debate on the phenomena of intersubjective understanding that are referred to through the label "social cognition" (for some introductions to this theme, see Barlassina and Gordon 2017; Marraffa 2011; Ravenscroft 2016; Zahavi 2014).

In this introductory chapter, I will present three main theoretical accounts of this phenomenon. Two of them have principally characterized the debate from the beginning and they are known as *theory-theory of mind* (TT) and *simulation-theory of mind* (ST). The third one has emerged as an alternative to both the others and goes back to the accounts of social cognition developed by authors in the phenomenological tradition (Scheler [1923] 1973; Schutz 1932; Stein [1917] 2008). This third theory is known as *direct perception account* (DPA) of our understanding of others.

None of these theories, however, is a monolithic system proposing a complete and unified account of all aspects of social cognition phenomena. On the contrary, each theory presents a variety of proposals that differ from one another in many aspects, while at the same time keeping some crucial tenets of the more general theory to which they belong. In what follows, I will present the main theses of the three theories, while also trying to present the main differences between the various versions of each of them. Moreover, I will highlight, particularly, how these theories account for our experience and understanding of other people's affective states even though most of the theses I will present are intended by their authors to be valid also for other phenomena of our mental life (e.g. beliefs, intentions or desires). Finally, for the sake of clarity, it is worth underlining that in what follows I will use the expression "affective states" to refer to the whole class of affective phenomena such as emotions, moods, and feelings. Even though such phenomena are different from one another, for the purposes of this work we can consider them under the same class of affective states (for an outline of the differences between affective phenomena, see Scheler [1916] 1980; De Monticelli 2008; Deonna and Teroni 2012).

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2 Theory-theory of mind

When we come to the analysis of social cognition, the crucial phenomenon at stake is our ability to attribute mental states to others and to interpret, explain and predict their behavior in mentalistic terms – that is, for instance, in terms of intentions, beliefs, emotions or desires (Gallagher and Zahavi 2008: 172). As previously mentioned, the contemporary debate has been mainly characterized by two (alternative) theories that try to describe and explain this ability: theory-theory (TT) and simulation-theory (ST).

Some of the proponents of TT are Baron-Cohen (1995), Leslie (1987), Carruthers (1996), Gopnick and Wellman (1992). The main tenet of TT is that our understanding of others is based on the adoption of a theoretical stance. The idea is that, in understanding others, we make use of our knowledge of a particular theory that is folk psychology: this is a set of commonsense beliefs about why people do what they do, and what mental states might cause the behavior observed (Gallagher and Zahavi 2008: 173). Therefore, for instance, if I see a son crying at the funeral of his mother I can attribute to him feelings of sadness and pain since I have some commonsense knowledge about the relationship between a mother and her son, the affection that links a son to his mother, the fact that sadness and pain are usually expressed by crying, and so on. Such ordinary knowledge allows me to interpret the behavior of others in mentalistic terms; that is, not just as physical movements but as expressions of affective states. This allows me to attribute such affective states to the subject I am looking at.

On this issue, Carruthers (1996), who is one of the leading exponents of TT, maintains

> [H]ow, on the theory-theoretic account, does one set about attributing beliefs, desires, and intentions to others? Partly, and most fundamentally, through deploying one's theoretical knowledge. It is in virtue of knowing such things as: the relationship between line of vision, attention, and perception; between perception, background knowledge, and belief; between belief, desire, and intention; and between perception, intention, and action; that one is able to predict and explain the actions of others, on this account. (Carruthers 1996: 24)

In this sense, according to Carruthers, our understanding of mentalistic notions such as intention, perception, emotion, desire and belief comes mainly from our knowledge of the role such states play within a folk-psychology theory of the functioning and structure of our mind. In other terms, understanding and mastering such notions means knowing, at least implicitly, enough of the corpus of folk psychology and knowing the functions such notions, and their referents, have within the theory (Carruthers 1996: 22). For instance, a typical piece of knowledge we could have via our mastering of folk psychology is: if someone has the intention to bring it about that P when the condition R occurs, and he believes that R is now occurring, then he will act so as to bring it about that P (Carruthers 1996: 24).

However, according to the author, such a general, non-content-specific, theoretical knowledge is likely to act as a framework, which on occasion needs to be implemented in order for one to be able to provide more fine-grained explanations and predictions of other people's mental states. Carruthers suggests that two different mechanisms of implementation may be in use, to some degree: a supplement of one's initial folk-psychology theory,

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with many more specific folk-psychological notions and information; or a mechanism of simulation, which uses connections with one's own mental states to predict and explain those of others. The introduction of this mechanism of simulation is an important concession to TT's competing theory (i.e. ST), as will emerge below. However, Carruthers maintains that the simulation mechanism would play a limited role in understanding others, since the core of this process still remains based on the application of the notions of folk psychology.

Carruthers, as also Scholl and Leslie (1999) for instance, is moreover a defender of the idea that at least the core aspects of folk psychology are innate, rather than acquired through learning or a process of theorizing. The idea is that folk psychology appears in the individual through a process of ontogenetic development – even though some triggering experiences are thought to be required: young children pass through different stages in the maturation of their folk psychology repertoire, similarly to the way the human species passes through different stages in the history of its evolution (Carruthers 1996: 22–23).

The development of children's ability to understand others, moreover, is brought about by the maturation of an innate cognitive module dedicated to mindreading (the notion of "cognitive module" derives from the computational and representational theory of the mind developed by Fodor [1983] and finding its seminal insights in the work of Chomsky [1965, 1980]. For an introduction to these themes, see Marraffa [2008]). Such a cognitive module is a mechanism that works on one's body of knowledge of folk psychology, allowing us to attribute cognitive and affective states to others. Indeed, a body of knowledge such as the one of folk psychology is an "inert psychological structure" without a cognitive mechanism that manipulates it to bring about behavior (Marraffa 2011: 6–7).

According to Carruthers (2013), it is not merely the case that the core of folk psychology repertoire is innate. The mechanism that works on folk psychology repertoire is innate too, even though it matures over time. Indeed, the author defends a version of the idea proposed by Leslie (1994, 2000), according to which the mindreading module is a domain-specific mechanism (i.e. it works specifically on the repertoire of folk psychology, not on other cognitive domains) that is functional early in infancy (as the author tentatively suggests, by the middle of the first year of life). This mechanism allows infants to use the core folk psychology knowledge that is necessary to represent all basic types of mental states of other agents. It is argued that the representational capacities of this system do not alter with age, but just become more streamlined and efficient. Indeed, according to Carruthers, what develops over time are the quality and extent of the interactions between this system and other mechanisms, such as the executive, attentional, and planning ones (for a review of the empirical data that, according to the author, are well accommodated by this theory, see Carruthers [2013]).

It is worth noticing, however, that this proposal is not intended by the author to rule out a role for learning, albeit a subsequent one. The idea is that the mindreading mechanism is likely to enrich itself as development proceeds, becoming able to exploit new ways of inferring people's mental states from behavioral or contextual cues. Moreover, learning and development can also bring about an expansion of the range of mental states that the mechanism is able to elaborate, such as notions and concepts about socially constructed types of emotion (Carruthers 2013: 142–143). Carruthers exploits this strategy to explain

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experimental data about the development with age of children's ability in elaborating and making use of high-level notions such as false beliefs and misleading appearances. On the extended literature on this issue, see Baron-Cohen et al. (1985), Carruthers (2013), Frith and Happè (1999). On Carruthers' theory of mindreading in adults, on the other hand, see Carruthers (2017).

In opposition to the idea that the core of folk psychology and the mindreading cognitive module are innate, a theory known as "the child (as little) scientist theory" has been proposed (Marraffa 2011: 5). According to this approach, the folk psychology body of knowledge that allows us to understand others has a structure that is analogous to that of a scientific theory. Moreover, this theoretical folk psychology repertoire is acquired, stored, and used exactly in the same way as scientific theories: by elaborating explanations, providing predictions, and also making auxiliary hypotheses or revising the theory when the predictions fail (Marraffa 2011: 5). In trying to understand others, therefore, the child operates as a little scientist who makes explicative hypotheses and tests them for verification.

Moreover, unlike the nativist view defended by people such as Carruthers and Leslie, the child-scientist theory also argues in favor of a domain-general mechanism underlying mindreading. This is a mechanism that can be used for problem-solving in many different content domains and it contrasts to the domain-specific innate module hypothesized by the nativist approach.

Some of the prominent proponents of the child-scientist theory are Gopnik and Meltzoff (1997), Perner (1991), Wellman (1990). Gopnik and Meltzoff (1997), for instance, argue for one of the most radical versions of this theory: according to them, the body of knowledge at the basis of our mindreading ability has all the structural and functional features that they recognize in most scientific theories. One of these features is defeasibility. Indeed, Gopnick and Meltzoff maintain that, as in scientific practice, also in the case of the child's elaboration of a theory of mind, a previous and more naïve theory may be abandoned and replaced if a certain amount of counterevidence presents itself (Marraffa 2011: 5).

More specifically, for instance, Gopnick and Wellman (1992) propose that children undergo a change in their mentalistic psychological theory when they are between two and a half years old and around four (Gopnick and Wellman 1992: 149–153). This change is not a simple and straightforward switch but a gradual transition from one view to another. According to the authors, in fact, when they are two years old, children are able to attribute to others simple mental states such as perceptions and desires. These two states are understood in non-representational terms, so that desires are conceived as drives towards objects, and perceptions as awareness of objects: no propositional or representational relationship between these mental states and the world is in place at this stage, so that mental states are not conceived as different representations of reality, but as directly involving reality itself. Around three, children start showing signs of a richer mental ontology: they seem to have a general notion of belief and of some other mental states – such as pretenses, dreams and images – whose contents are not present. However, for instance, even though they seem to have a notion of belief, their understanding of it still seems to have a non-representational character: the content of belief is taken by the child as directly reflecting the world and, therefore, the notion of belief does not easily encompass the possibility of misrepresentation. At times, three-year-old children seem to recognize the existence of be-

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liefs that misrepresent reality but, if asked about one's belief, for instance, they simply cite the facts. Gopnick and Wellman's idea, therefore, is that three-year-olds can show that they recognize the existence of mental representations and make use of them to understand others, but just in isolated cases, as auxiliary hypotheses that explain certain very specific mental phenomena. It is only by the age of four or five that children develop a quite different view of the mind, that is, a representational one, in which almost all mental functioning involves (propositional) representations (Wimmer and Perner 1983). This new view provides an actual revolution in the child's view of the mind and allows him or her to account for cases of false-beliefs and misrepresentations in a more systematic way – a similar position is defended by Perner (1991).

In recent years, however, this developmental timeline has been questioned (Barlassina and Gordon 2017). Indeed, Onishi and Baillargeon (2005) show that children of 15 months seem to be already able to represent others' false beliefs. The main difference with respect to previous studies, such as the one reported by Wimmer and Perner (1983), is that in Onishi and Baillergeon's experiments children were not asked about the beliefs of others, but they were exposed to a non-verbal version of the test. Indeed, in the classic studies about the representation of false beliefs, children were exposed to the following scene. There are two dolls, Sally and Anne, in a room with three objects: Sally's ball, a box and a basket. Sally puts the ball in the basket and leaves the room. Then, Anne moves the ball from the basket to the box. Afterwards, Sally comes back. At this point the children are asked where they think Sally will look for the ball. To give the correct answer – i.e. that Sally will look inside the basket – the children should attribute Sally the false belief that the ball is in the basket. Children seem to pass this test by the age of four (Wellman et al. 2001). In Onishi and Baillergeon's experiment, differently, the infants see an actor hiding a toy in a green box. Then, the infants see the toy sliding out of the green box and hiding inside a yellow one. In the false belief version of the test, the actor does not see the change of location of the toy. Then, half of the infants see the actor looking for the ball in the green box (condition A), the other half see the actor looking in the yellow box (condition B). Results show that infants in condition B look significantly longer to the scene with respect to infants in condition A. Since, according to the paradigm of violation of expectation, infants look for a longer time at unexpected events, it can be argued that condition B was unexpected for the children: this could be so if they already have the ability to attribute false beliefs to others – that is, if they are able to attribute the false belief that the toy is in the green box to the actor. Many other versions of the non-verbal false belief test have been carried on in recent years (Baillargeon et al. 2016) and they all seem to show that infants can attribute false beliefs to others much earlier than the age of four. The obstacle in classic experiments on the topic, therefore, could have been the linguistic format of the test. If this is so, this aspect should lead to paying more attention to the way in which some mindreading abilities can be there even before the subject is able to express them by means of language, without forgetting to investigate, on the other hand, the way in which the acquisition of language can shape intersubjectivity and mindreading abilities (one development of this kind of studies is also that of investigating the relation between intersubjectivity and the acquisition of language in bilingual contexts. On this point see, for instance, Pavlenko [2014]).

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This brief presentation highlights some of the differences between the various versions of TT. However, it also shows that there is a common trait underlying all versions, which is the fact that, in this approach, understanding others is a theoretical, inferential and quasi-scientific practice. Also, having access to the affective states of others seems to be a matter of attributing such affective states to others based on inferences to the best explanation of the observed behavior. The emotions, feelings and moods of others are therefore totally unobservable and can be just inferred, or theoretically postulated, starting from the observable behavior (Gallagher and Zahavi 2008: 172).

3 Simulation-theory of mind

The theory that has been classically opposed to TT is the simulation-theory of mind. ST originates from one of the main objections raised against TT: the idea that the mechanisms hypothesized by TT are excessively, and unnecessarily, theoretically laden and that they appear as cognitively overloading mental processing. The idea at the basis of ST is that it is not necessary for us to undertake routines of theoretical inferences to grasp the mental states of others. Indeed, we have at our disposal a perfect model of the minds of others: our own mind. The latter, in fact, can be used as a simulator to understand what the other person is undergoing in a certain situation and to predict her possible behavior. In the case of affective states, for instance, if I see a friend of mine exulting because her favorite volleyball team has just won the gold medal in an international competition, I can attribute joy to her because I can simulate what my emotions would be if I were in her situation. No theoretical inference is needed here, but just a simulation of the affective states of the other through my own mind.

ST has been and still is defended by many authors, such as Gallese and Sinigaglia (2011), Goldman (2006), Goldman and Sripada (2005), Gordon (1986), Hurley (2008). Also in the family of ST theories, however, there are some different theoretical versions. One of the issues on which there are differences is the exact definition of mental simulation one should adopt. The crucial divide seems to be about whether "mental simulation" should be defined in terms of *resemblance* or in terms of *reuse* – even though there are also hybrid theories that combine elements of both accounts of simulation (Barlassina and Gordon 2017).

The common resemblance-based definition of "mental simulation" is that a state M* is a mental simulation of a state M if and only if both M and M* are mental states, M* resembles M in some significant aspects, and in resembling M, M* fulfills one of its own functions (Barlassina and Gordon 2017). In this sense, for instance, I can make a mental simulation of my friend's rejoicing for the volleyball match if I produce in myself an affective state that is similar to my friend's rejoicing in some crucial aspects (e.g. it has the main features of joy, and not of sadness or shame, for instance) and if one of the functions of the affective state I produce is actually that of resembling the affective state of my friend.

Goldman (2002, 2006) describes mental simulation by referring to the property of a simulation to resemble the simulated state. Indeed, he maintains that, in simulating, the attributor tries to mimic the mental activity of the target. According to Goldman, indeed, the ability

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to mimic other people's mental states is crucial, so that the author claims that simulation cannot lead to accurate third-person attributions unless pretend (imitated, reproduced) states resemble their non-pretend counterpart in crucial aspects (Goldman 2002: 10).

More specifically, however, Goldman describes the act of mindreading as a process that is composed of two stages: one, as I have already said, is simulation and the other is *projection*. Indeed, in describing ST and trying to distinguish it from TT, Goldman says:

> Thus, ST is indeed distinctive in holding that a mindreader commonly takes one of her own first-order (pretend) states and imputes it (as a genuine state) to the target. I shall call the act of assigning a state of one's own to someone else projection. As we have just seen, projection is a standard part of the ST story of mindreading. It is the final stage of each mindreading act, a stage that involves no (further) simulation or pretence. Indeed, it typically involves an "exit" from the simulation mode that occupies the first stage of a two-stage routine. The simulation stage is followed by a projection stage. Thus, a more complete label for the so-called simulation routine may be "simulation-plus-projection". (Goldman 2006: 40)

In other terms, to return to our previous example, I can attribute joy to my friend at the volleyball match by means of a routine that lets me first produce in myself a vicarious state of joy that resembles my friend's, and then project this state – this time as an actual and not pretend one – on my friend.

The second main way in which mental simulation has been conceived is, as I said, by means of the notion of reuse. According to the reuse-based definition of mental simulation, a state M* is a mental simulation of a state M if and only if M and M* are mental states, M is generated by a cognitive process P, M* is generated by a cognitive process P*, P is implemented by the use of a cognitive mechanism of type C and P* is implemented by the reuse of a cognitive mechanism of type C (Barlassina and Gordon 2017). In other terms, we can have a mental simulation by reuse if, and only if, the two cognitive processes that generate, respectively, M and M* are implemented by the same mechanism, which is used in the case of M, reused in the case of M*. The crucial aspect here lies in the difference between cognitive processes and cognitive mechanisms, and between use and re-use. Regarding the first difference, cognitive processes are intended as information-processing activities considered as abstracted from their physical implementation; cognitive mechanisms, on the contrary, are the actual physical structures – e.g. some parts of the brain – that implement certain cognitive processes (Barlassina and Gordon 2017). Mental states M and M*, therefore, are produced by different cognitive processes (P and P*) that, nonetheless, exploit the same physical structure of type C. This structure is used when implementing P because implementing P is its primary function. The same structure is re-used when implementing P* because implementing P* is a different, non-primary function of the structure.

It is worth noticing here that in order to test this model of mental simulation we should look at the actual physical structures involved in our understanding of other people's mental states. In this sense, the issue is not only theoretical but also empirical. Now, is there any empirical evidence of the reuse model of mental simulation? According to many authors, such as Gallese and Sinigaglia (2011), Goldman and Sripada (2005), the answer can be positive.

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Indeed, this position is supported by the interplay between ST and neuroscience and particularly by the crucial discovery, by the group led by Giacomo Rizzolatti at the University of Parma, of mirror neurons (Gallese and Goldman 1998; Gallese 2016; Rizzolatti and Craighero 2004; Rizzolatti and Sinigaglia 2007). Such neurons were first identified, in the early 1990s, in the ventral premotor cortex and inferior parietal lobe of macaque monkeys (Marraffa 2011: 17). The specific feature of mirror neurons is that they are activated not only when the monkey executes motor acts (such as grasping, holding or manipulating objects), but also when it looks at the same acts performed by the experimenter or a conspecific. Many brain imaging studies support the existence of a mirror system for actions also in human beings. For instance, functional MRI (fMRI) studies showed activation of neurons in human ventral premotor and parietal cortices both during action execution and during action observation tasks (Rizzolatti, Fogassi, and Gallese 2002). The brain areas involved are assumed to be homologous to the areas containing mirror neurons in monkeys (Marraffa 2011: 17).

Based on these neuroscientific discoveries, it has been proposed that mirror neurons are at the basis of the process of simulation, and in particular of the reuse-model of simulation. Since they are neurons of the motor and premotor cortices, activated both when acting in a certain way and when observing others acting in the same way, mirror neurons can be considered to be the mechanism used when implementing the process for action execution and re-used when implementing the process of watching others acting. The involvement of the same mechanism in the two situations allows one to interpret the case of action observation according to the re-use model, that is, as a case of (subpersonal, neural) simulation of the action observed.

Interestingly, a similar mirror mechanism has been hypothesized for emotions and other affective states. Wicker et al. (2003), for instance, did an fMRI study on disgust. In the first session of the experiment, participants viewed movies of subjects smelling the contents of a glass in three different cases (i.e. disgusting, pleasant, or neutral content) and expressing the respective emotions with three different facial expressions. In the second session of the experiment, the same participants inhaled disgusting or pleasant odorants themselves. The crucial finding of Wicker et al. was that the left anterior insula and the right anterior cingulate cortex are activated both during the experience of disgust brought about by disgusting odorants and during the observation of facial expressions of disgust. The fact that the observation of disgust-expressive faces activates the same neural substrates implicated in the experience of the same emotion has been considered evidence of the fact that, when observing someone feeling disgust, such neural structures allow for simulation by re-use of the emotion seen and allow the observer to understand it (for experiments involving mirror system and other emotions, see Goldman and Sripada [2005]). Indeed, the underlying idea is actually that, by re-using (automatically and subpersonally) the same mechanisms involved in the experience of our own emotions, we are able to understand the emotions of others. Therefore, going back to one of our examples, according to this model I can understand my friend's joy at the volleyball match (at least in part) because the same (neural) mechanisms involved in my experience of joy are re-involved in looking at her.

As we have seen, in both the ST versions I have considered, there is no need for theoretically informed inferences about other people's mental states, but just routines of simu-

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lation that, on the basis of the observer's own experience, allow one to simulate the experiences of others and understand them (for other, slightly different, versions of simulation routines in understanding other people's emotions, see Goldman and Sripada [2005]).

4 The direct perception account

The third model of understanding others I would like to consider is the so-called direct perception account (DPA), proposed by authors such as Gallagher (2008), Zahavi (2010, 2014), Overgaard (2012), Krueger (2018, 2021). In their proposals, these authors have largely referred to the thought of phenomenologists such as Stein (2008), Scheler (1973), Husserl ([1905–1920] 1973; [1921–1928] 1973), Schutz (1932), who have developed rich analyses of the phenomena of intersubjectivity and intersubjective understanding (for other non-phenomenological contemporary DPAs, see for instance Newen 2017; Newen, Welpinghus, and Juckel 2015; Green 2010).

Despite their differences, all versions of DPA started with a critical attitude towards the two theories considered before, that is theory-theory and simulation-theory. What the proponents of the direct perception model criticize in TT and ST is a common assumption that arguably lies at the basis of both groups of theories. Krueger calls this assumption the "unobservability principle" (UP) (Krueger 2012: 149): the idea that the intentions, beliefs, desires and emotions of others cannot be experienced by us in a direct way. In both models, in other terms, the experiences of others are perceptually inaccessible to anyone but their owner; the fact that we cannot live such experiences in the same way in which the subjects of those experiences can makes our access indirect and somehow mediated by other kinds of processes.

Indeed, both TT and ST can be interpreted as (explicitly or implicitly) adopting this principle. The mental lives of others have to be inferred via the adoption of a theoretical apparatus (e.g. folk-psychology theory), or simulated by the observer using his or her own mind as a model for that of others. In neither theory are others and their experiences present and directly given to the observer.

Questioning the unobservability principle itself, contemporary defenders of the direct perception approach refer to classic phenomenology in arguing that, quite often, we do have direct perceptual access to the mentality of others. The idea, therefore, is that others and their minds are not inevitably hidden from the observer but can be grasped directly, without necessarily relying upon extra-perceptual cognitive mechanisms, such as inferences and simulations.

This theoretical position is defended by reconsidering what is properly given in our encounters with others. DPA proponents often start from Scheler's idea according to which, in our encounter with the other, we are neither confronted with a mere body nor with a mere mind, but with a psycho-physical *Ausdruckseinheit* 'expressive unity' (Scheler 1973: 261). According to Scheler, what is originally given to us is the living organism as an individual whole or, better, as an individual bodily unity; it is only through a subsequent process of abstraction that we can "divide" this unity, focusing either "inward" or "outward" (Scheler 1973: 261–262).

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Scheler calls the acts in which we encounter others and directly perceive their lived experiences *Nachfühlung* 'visualized feeling', referring with this term to what Husserl first, and then Stein, called *Einfühlung* 'empathy'.

The basic idea in Scheler's account is that expressive phenomena are what are primarily given to us and that our experience of them is our primary experience of the world we inhabit. Referring to some psychological data provided by Stern and Koffka, in fact, Scheler specifies that we can perceive the expressive meaning of a gesture or of a face even without – or before – being aware of their singular components, so that "I can tell from the expressive 'look' of a person whether he is well or ill disposed towards me, long before I can tell what colour or size his eyes may be" (Scheler 1973: 244).

This priority of the perception of expressive phenomena also means that our experience of a living world precedes our experience of the world as a mechanical and inanimate one.

Against this background, it is easier to understand why Scheler rejects the view according to which the first step of our encounter with others is the perception of a mere bodily and behavioral exteriority, without psychological and personal properties. Such a view, in fact, does not recognize the phenomenological fact of the priority of expressivity and forces us to consider behavior as neither expressive nor significant, supposing that all that is given is merely physical qualities. According to Scheler, on the contrary, expressive phenomena are not just the primary datum of perception, but the phenomenon in which the experiences of others, especially feelings and emotions, are given. That being so, expressive phenomena are the ones that allow us a direct and non-inferential perceptual access to others. In other terms, they are not equivalent to physical, inanimate phenomena but are able to manifest the experiences of others, giving us a direct access to them.

Contemporary authors such as Gallagher and Zahavi (2008: 181–187) have insisted on this point to criticize UP, and Krueger and Overgaard (2012) also try to clarify how expressive phenomena can be considered as directly manifesting one's experiences. They argue, for instance, that expressions can be considered as the visible constitutive proper parts of certain mental phenomena. The idea is that such mental phenomena, such as feelings or emotions, can be considered as having a complex hybrid structure, constituted both by internal aspects (e.g. the lived experience of the subject) and external ones such as the bodily gestures and expressions (Krueger and Overgaard 2012: 250–258). In this sense, when we perceive expressive behavior and actions we do not perceive the external physical outputs of internal states, but rather proper parts of mental phenomena. In this way, we can have direct perceptual access to others and their experiences, since we have direct perceptual access to some of their proper parts (Krueger 2012: 155–156) – for some critical remarks, see Glazer (2018).

Along similar lines, insisting on perception's ability to give us direct access to others and their experiences, Gallagher (2008) defines perception as smart. The basic idea is that, most of the time, perception is smart enough on its own, without the aid of other inferential or simulationist mechanisms, to deliver some sense of other people's intentions, feelings, desires. As in the case of visual perception where, for instance, I do not see just a certain red-colored unrecognized mass with a specific shape and then use some other cognitive mechanisms to arrive at the experience of my car, but simply and directly see my car;

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similarly, most of the time, I do not need inferential or simulationist mechanisms to access others and their experiences, but can have a direct perceptual access to them (Gallagher 2008: 536–538). The idea here is that perception does not grasp only low-level properties such as color or physical bodily movements but also high-level aspects such as the kind of objects I am seeing (a car, another subject) and some of their properties. Obviously, this also means that perception can be cognitively penetrated (e.g. I need to possess the concept of "car" to recognize that red object in front of me as a car, just as I need to know something about academic conferences in order to recognize what a group of people is doing in a university room). However, this does not necessarily mean that such a recognition is indirect and not perceptual. Even though I need to master some concepts in order to see my car as "my car" or a group of people as "subjects discussing a scientific issue", this does not make my access non-experiential, nor does it turn my car and the researchers in the room into a kind of unobservable or theoretically postulated object – for a similar argument, see Zahavi (2010). To be sure, however, Gallagher and other defenders of DPA do not exclude that other processes, such as theoretical inference or simulation, may be used in our practices of understanding others. Rather, they just maintain that they are neither the ordinary nor the primary methods we employ (on this point, see Gallagher and Zahavi 2008; Gallagher 2008; Zahavi 2010).

Moreover, in defending his direct perception account, Gallagher particularly focuses on interactive contexts. Indeed, when speaking of the ordinary cases in which direct perception seems to suffice to understand others, he usually refers to cases of interaction, where the perceiving and the perceived subjects share the same world and are involved in face-to-face practices or even in mutual understanding (Gallagher 2008: 540). He also distinguishes two main stages of the development of human ability of intersubjective understanding, i.e. primary intersubjectivity and secondary intersubjectivity (for more details about this aspect, which I cannot develop here, see Gallagher 2001; Gallagher 2005; Gallagher and Zahavi 2008. For other contemporary accounts that stress the role of bodily interaction and face-to-face practices for intersubjective understanding, see De Jaegher 2018; Fuchs 2016; Reddy 2018). Obviously, intersubjective understanding becomes more nuanced and deepened when language comes into play: linguistic interactive contexts allow subjects to share a common world of social meanings that acts as a means of better mutual understanding (Gallagher and Hutto 2008). For instance, talking with my friend Sarah about the reasons of her sadness can make me perceive her affective state in a more vivid way and understand it more profoundly. Exploring the way in which linguistic and narrative practices can help the direct perception of the mental and affective states of others is a crucial issue for the proponents of DPA.

As this brief presentation of DPA shows, therefore, according to this model, our primary and usual way of accessing the mental states of others is by directly perceiving them, by means of accessing their expressions. In the case of an affective state, for instance, the idea is that I can understand that a friend of mine is feeling ashamed for what he has said publicly because I can directly grasp his shame in his blushing, or in his attempt to hide away from others. Expressions are the ways in which affective states themselves become visible, and, most of the time, they obviate the necessity of undertaking routines of theoretical inferences or simulation. Let us then conclude with a *locus classicus* of this theoretical position, which has inspired and guided the whole development of DPA.

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> For we certainly believe ourselves to be directly acquainted with another person's joy in his laughter, with his sorrow and pain in his tears, with his shame in his blushing, with his entreaty in his outstretched hands, with his love in his look of affection, with his rage in the gnashing of his teeth, with his threats in the clenching of his fist, and with the tenor of his thoughts in the sound of his words. If anyone tells me that this is not "perception", for it cannot be so, in view of the fact that a perception is simply a "complex of physical sensations", and that there is certainly no sensation of another person's mind nor any stimulus from such a source, I would beg him to turn aside from such questionable theories and address himself to the phenomenological facts. (Scheler 1973: 260)

5 Conclusion

Understanding the affective states – as well as all other mental states – of others is a very tricky matter, both for philosophy and for psychology. Even though our everyday life experience seems to show us that we generally, and quite directly, grasp the emotions, moods and feelings of others, understanding how this can be possible raises crucial ontological and epistemological questions about what affective states are and how we can access them. The three main theories I have analyzed – theory-theory, simulation-theory, and direct perception account – give us three different accounts of the phenomena of intersubjectivity, starting from different conceptualizations of what is given in perception (e.g. mere physical bodies or complex expressive phenomena) and different analyses of the cognitive processes involved. However, even though each author privileges one explicatory strategy over another, most researchers also recognize that different strategies (i.e. direct perception, simulation routines, theoretical inferences) may together be in play in our understanding of others, depending on the situations, the available information, the contextual cues (see on this point Carruthers 1996; Gallagher and Zahavi 2008; Gallagher 2008). Understanding others and their affective states, therefore, does not seem to be the output of a unique mechanism, but a more complex procedure in which different cognitive strategies can be in play (for a recent overview of the different theoretical positions in play, see Avramides and Parrott 2019). Further research should focus, therefore, on clarifying how such a complex and non-monolithic procedure works. Does one of the three theoretical positions presented here provide us with the right procedure to endorse, to which just one or more capabilities from another theory have to be added – as so-called hybrid theorists seem to believe (Gallagher 2015: 461)? Or is it the case that no theory provides us with the default mechanism, so that the concrete situation is the one that specifies what procedure is appropriate in that context – as pluralist theorists maintain? In this latter case, it has to be clarified, for instance, whether one capacity is more basic than others or whether there is a hierarchical ordering in the way different practices function. Moreover, something more has to be said about possible mechanisms or principles that determine which capacity to use for which situation (Gallagher 2015: 461).

These are just some of the next questions that need to be answered, highlighting that social cognition is still there to be further investigated and properly understood.

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41 The interaction of gender and culture in the communication of emotion

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Abstract: Communicating emotions is a transactional process that can be understood by examining the practices of the expressor and the practices of the receiver (e.g., emotion perception or understanding). Emotion expression, perception, and understanding vary as a function of gender and culture, and importantly, the interplay of gender and culture, as these emotional processes are bound to the norms and expectations within sociocultural contexts. Importantly, sociocultural beliefs and values about emotions are transmitted via socialization starting early in life, affecting one's emotional behaviors over the life course. Therefore, we examine these constructs taking a developmental approach to the socialization of emotion through gender and culture norms that are shaped by parent-child interactions and other interpersonal interactions. We also discuss the ways in which emotion communication varies by gender and culture in online communication (e.g., emoticon usage, online groups), given the increasing importance and prevalence of these platforms. Finally, we provide recommendations for future research, both conceptually and methodologically.

1 Introduction

How do we communicate our emotions? Emotion communication is the dynamic process of conveying one's own emotions verbally or nonverbally and interpreting another's verbal or nonverbal expression of emotions. It requires one individual to express emotions and another to receive (i.e., perceive and understand) that communication (Malatesta et al. 1987). Beliefs and expectations affect emotion communication in different sociocultural contexts and are transmitted through socialization processes (Eisenberg, Cumberland, and Spinrad 1998; Morris et al. 2007). Therefore, in addressing the communication of emotion,

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consideration of gender and culture is critical, as emotional processes are particularly influenced by the socialization of norms and expectations attached to gender within sociocultural contexts beginning in infancy (Malatesta et al. 1986). In this chapter, we take a developmental approach to highlight findings that show differences in how emotions are communicated as a function of gender and culture separately, and importantly, how gender and culture interact as a dynamic unfolding in which women and men (and boys and girls) vary in emotion communication cross-culturally. Given that forms of communication are ever-evolving, we highlight several examples of emotion communication through technological platforms and end with a discussion of opportunities for methodological innovation and by noting areas that are ripe for future research.

2 Gender differences in emotion communication

Gender differences in emotion expression derive from both biological predispositions and experiences of emotional socialization, often leading to girls becoming more emotionally expressive than boys (Brody 1999). Gender itself, unlike sex (a biological system), is constructed by social and cultural factors (Hyde et al. 2019). Many studies address gender as if culture is not a consideration when assessing White, Western populations (Chaplin 2015). We acknowledge that American and European samples do not represent a norm to which other cultures ought to be compared, and that each investigation of gender needs to be contextualized within the culture of its participants. We present a selective review of existing studies to illustrate differences that exemplify the socialization of emotions as varied by gender. In this section, we first review research showing that mothers discuss emotions differently with their sons and daughters. Then, we describe how stereotypes about acceptable emotion experiences and expressions exemplify the continued emphasis on adherence to gender norms into adulthood. We conclude this section by reviewing two studies that evaluate gender differences utilizing technological methods (e.g., emoticon and emoji usage) as examples of novel means to evaluate emotion communication, since platforms for communication change over time.

How parents socialize their children can depend on the child's gender. Evidence for this contention can be found in research conducted in the United States and China. In a seminal study, Wang (2001) found that mothers discuss emotional experiences differently depending on whether they are talking to sons or daughters. In both American and Chinese mothers' conversations with their 3-year-old children, mothers from both countries provided more emotional explanations (giving causal information for children's feelings; i.e., "you feel sad because…") to daughters than sons (Wang 2001). Extending these findings, Wang (2013) found that Chinese mothers, both living in China and first-generation immigrants in the United States, talked more about emotional feeling states with their daughters than with sons, and that the daughters themselves ultimately talked more about their own feelings (vs. what boys talked about). Thus, across several distinct nations and cultural climates, mothers engaged in more dynamic emotion communication with daughters.

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Situational factors may also play a role in driving the gender differences in mother-child conversations about emotions (Fivush and Wang 2005). In both the United States and China, gender differences in emotion talk were attenuated when mother-child dyads discussed highly emotional experiences, while differences were more pronounced when daily emotional experiences were discussed (Fivush and Wang 2005). These findings suggest that although mother-child emotion communication may typically be more elaborate between mothers and daughters, in highly emotional situations, differences in mothers' emotion communication practices by child gender may decrease. Additionally, as girls are socialized to be more emotionally expressive (Fivush et al. 2000), and in turn talk about their feelings more than boys (Wang 2013), these early emotion socialization experiences may engrain gender differences that potentially affect emotion communication practices throughout the lifespan (e.g., Fivush and Zaman 2015; Grysman and Hudson 2013).

For brevity, we have highlighted only selected studies in this area; however, there is a vast literature describing gender differences in how parents discuss emotions with their children (Castro et al. 2015; Fivush et al. 2000; Root and Denham 2010; van der Pol et al. 2015). Despite largely converging evidence that there are broad gender differences in emotion socialization, it is important to note that other studies have found no or opposing evidence that girls are more extensively emotionally socialized than boys. For example, LaBounty and colleagues (2008) found that in using internal state language (ISL), although mothers used more emotion language than fathers, mothers and fathers did not show different ISL use with daughters versus sons. In Roger, Rinaldi, and Howe (2012), on the other hand, both mothers and fathers used more ISL when interacting with sons. ISL has also been examined in sibling discourse, as siblings serve as important communication partners (Brown and Dunn 1992) and children learn how to regulate and understand emotions through interactions with same- and opposite-sex siblings (Kramer 2014). These mixed findings highlight the complexity of socializing emotion communication that varies by the situation, relationship partner, the discrete emotion being measured, the parent's emotion response type (e.g., supportive vs. unsupportive), and parental characteristics (e.g., gender, affect; for a review, see Raval and Walker 2019; Waters et al. 2019).

Patterns of gendered emotion socialization continue to evolve through adolescence as parents of older American adolescents have been found to be less supportive of emotional displays than parents of younger adolescents (Klimes-Dougan et al. 2007). The prevalence of stereotypes (culture-specific shared notions) for what is expected of men and women experiencing emotions (e.g., sadness; what is felt) and expressing emotions (e.g., crying; what is shown) extends into adulthood (Hess et al. 2000). Given hypothetically negative emotional situations, American women expected themselves to express more sadness and fear, while men expected themselves to show anger and serenity (Hess et al. 2000). This gendered pattern is also present in how receivers perceive and interpret emotions in emotion communication. For example, Plant et al. (2000) found a gender-stereotyped interpretation of emotions, such that adults in the United States tended to rate men's ambiguous emotion expression as angry and sad, while women's anger was interpreted as blends of anger and sadness. Taken together, this literature suggests that social norms and expectations about emotions may impact the emotional behaviors of both the expressor and receivers throughout the lifespan.

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As computer-mediated and mobile communications thrive, emotions are increasingly conveyed via online forms of communication using "graphicons" (graphic icons; e.g., emojis, emoticons, GIFs; Herring and Dainas 2017). Emoticons (i.e., facial expressions made of symbols) or emojis (i.e., pictographic forms of language; Troiano and Nante 2018) have become proxies for nonverbal cues. Even in verbal interactions, nonverbal cues facilitate accurate transmission of emotion expression (Tang and Hew 2019). Using graphicons supports the expression of emotion online by providing pictorial depictions of facial and bodily displays normally reserved for face-to-face interactions (Tang and Hew 2019). Thus, examining gender differences in technological platforms adds to our understanding of how emotions are communicated differently by men and women in various contexts.

Several studies have investigated gender differences in emotion icon usage in online communication. For example, Wolf (2000) investigated emoticon usage (e.g., ;-) winking faces) in online groups (e.g., football, eating disorder, and divorce groups), finding that emoticon usage between men and women in same-gender discussion groups followed stereotypic patterns. However, when men interacted in a mixed-gender group, they used more emoticon language in accordance with the more predominantly female tendency to do so (Wolf 2000). In other words, men adopted the more stereotypically female pattern of expressing more emotion when in mixed company, a finding that highlights the importance of considering the interplay between emotion expressor and receiver in the situational context of their social group.

A more recent analysis evaluated emoji usage among Android users in 183 countries and revealed that women were more likely to use emojis, yet used fewer at a time (vs. men; Chen et al. 2017). Additionally, women preferred more face-depicting emojis and used emojis more in public forums and less in private communications (vs. men; Chen et al. 2017). These findings highlight the multiple ways in which emotions are communicated differently by gender and situational context. However, as gender norms and context both vary greatly by culture, the nuances in emotion communication must be further examined through that lens.

3 Cultural differences in emotion communication

The biocultural model of emotion posits that both biological factors and cultural factors contribute to emotional processes across different cultures (Matsumoto and Hwang 2012). Culture is generally defined as sets of shared practices, or systems of values, norms, and self-concepts that guide individuals' behaviors (Cole and Tan 2007; for a review, see Oyserman 2017). In examining the role of culture in emotion communication, most studies have utilized nationality as a proxy of culture, as there are systematic differences in cultural values and practices evident at the national level (Safdar et al. 2009). However, as different cultural values coexist within nations (Chen 2012; Tamis-LeMonda et al. 2008), a body of research has also examined within-culture variations in emotional processes (e.g., Butler, Lee, and Gross 2007; Cole, Bruschi, and Tamang 2002; Garrett-Peters and Fox 2007; Tao et al. 2012). Investigations into the cultural variation of emotion communication have yielded findings that suggest individual differences in expressing emotion (Safdar et al. 2009)

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and in receiving or interpreting emotion (emotion perception: Gendron et al. 2014; Yuki, Maddux, and Masuda 2007; emotional understanding: Ishii, Reyes, and Kitayama 2003). Additionally, emotional socialization may be culture-specific (e.g., Fivush and Wang 2005).

Research suggests that cultural differences in the expression of emotions stem from an amalgam of cultural values (Campos and Kim 2017), such as beliefs about emotions (expressing happiness should be moderated in public settings; Joshanloo and Weijers 2014; Peng and Nisbett 1999), self-construal (the extent to which the self is defined independently and in relation to connectedness with others; Cheung and Park 2010), and the country's level of collectivism versus individualism (Matsumoto et al. 2008). For example, because collectivist cultures emphasize group harmony and communal relationships, personal emotions are deemed less important than they are in cultures higher in individualism (Matsumoto et al. 2008). Additionally, how emotion itself is valued within a culture may be another factor underlying differences in emotion expression. In line with the notion that the desirability of specific emotions varies across cultures, the affect valuation theory postulates that while low-arousal positive emotions like calmness are more valued among East Asians, high-arousal positive emotions like excitement are more valued among European Americans (Tsai, Knutson, and Fung 2006).

There are important differences in how emotions are expressed across cultures, especially in terms of display rules (Matsumoto et al. 2008; Safdar et al. 2009). Display rules, or culturally shared norms that prescribe and guide how individuals express emotions (Safdar et al. 2009), present differently in Western versus Eastern countries (e.g., Matsumoto et al. 2008). For example, in North America, it is normative to express one's emotions, especially positive emotions, whereas in East Asia, expression of intense emotions is considered less desirable (Matsumoto et al. 2008; Safdar et al. 2009). In turn, suppressing emotions in face-to-face interactions has been found to lead to negative social consequences, such as being perceived as withdrawn and hostile and provoking negative responses from partners; however, this effect was attenuated when individuals held Asian values including norm conformity and beliefs about emotion inhibition (vs. European American values; Butler et al. 2007).

Similarly, a few studies have revealed cultural differences in emotion perception by the receiver. East Asians, such as Japanese, more often attend to the eye region to recognize emotions from facial images, whereas Americans are more likely to judge emotions by attending to the mouth area, possibly because overt, verbal expression of emotions is more acceptable in Western cultures (Jack et al. 2012; Yuki et al. 2007). Other studies examining cross-cultural differences in emotional perception found that Asians (Japanese, Filipinos) are more sensitive to nonverbal cues when perceiving and understanding emotions compared to Westerners (Americans; Ishii, Reyes, and Kitayama 2003; Ishii et al. 2011). Collectively, these findings suggest that in a cultural context where overt, verbal emotion expression is less normative, individuals are more attuned to nonverbal contextual information such as eye expressions when perceiving others' emotions.

Developmental work has investigated cultural differences in emotional socialization within parent-child dyads having conversations about emotions. Chinese mothers having conversations with their 3-year-old children showed more emotion-criticizing behaviors (e.g., used emotional experiences to teach social consequences and reinforce appropriate

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behavior), while American mother-child dyads showed more emotion-explaining style (e.g., mothers provided more causal explanations and elaborations; Wang 2001). In another study, Chinese mothers living in China were found to use emotion socialization strategies that are typical of Western societies to a greater extent than Chinese mothers enculturating into the United States as first-generation immigrants (Wang 2013). This suggests that first-generation immigrant mothers may consciously seek to preserve traditional cultural values such as interdependence and moderation (Wang 2013). Relatedly, Cervantes (2002) also found that Mexican immigrant mothers used more emotion explanations than labels, whereas Mexican American mothers used comparable levels of both types of emotion talk.

As in our discussion of gender differences, there are also notable variations between cultures in the online use of graphicons to communicate emotions. Park and colleagues (2013) examined emoticon usage in social media across 15 countries. Individuals in East Asian countries, such as Korea and Japan, more often used vertical emoticons that focus on the eyes such as ^^ and T_T (smiling and crying, respectively). However, Western countries such as the United States and Australia, used more horizontal emoticons such as :) and :((smiling and frowning, respectively). Thus, the cultural differences in attending to facial regions during emotion perception (Jack et al. 2012; Yuki et al. 2007) may extend to emotion communication using graphicons (e.g., Eastern emphasis on the eyes).

As these studies highlight, emotion expression, emotion understanding, and emotion perception vary as a function of the culture in which they are assessed, which may be associated with differences in the socialization of emotions. Our discussion so far has focused on the effect of gender *or* culture as factors differentiating the ways in which emotions are communicated. Though the studies we have highlighted do not argue that gender and culture operate in isolation, some researchers have ventured to examine the impact of both gender and culture together. As gender and culture are socializing forces that vary across interpersonal and sociocultural contexts, their combined impact on emotion communication may be greater than either individual process. Here, our discussion turns to findings that highlight the nuances involved in the communication of emotion as a function of the dynamic interplay of gender and culture.

4 The interplay of gender and culture in shaping emotion communication

Gender norms and stereotypes are themselves culture-specific attitudes. Gender norms may be more stringent in cultures with more "cultural tightness" (clear, strict social norms) than those with more loosely defined norms for social behavior (Gelfand 2012). Thus, as culture informs gender norms, the consideration of culture and gender in tandem is essential for understanding the origins of individuals' emotion communication through socialization. Emotion communication, through parent-child interactions and later adult interactions, manifests in various aspects of emotion functioning such as parents' reactions to children's emotions, the use of display rules, and emotion expression in person and online – all of which operate under the framework of emotion socialization. Because gendered

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norms about emotions are constructed within larger sociocultural contexts (Shields 2013), we have selected a sampling of research to review below that has starkly elucidated the interplay between gender and culture on emotion communication.

4.1 Parent-child relationships

Both child and parent characteristics (e.g., gender) transact with cultural and situational factors to influence emotion socialization behaviors (Raval and Walker 2019). As gendered norms attached to emotion may differ by culture, socialization practices (e.g., reactions to children's emotions, socializing agents' emotional expressivity, discussion of emotions with children; Eisenberg et al. 1998) prescribed by such shared norms may differ. Indeed, evidence indicates that different ethnic groups in the United States may have different values and norms about emotion expressions depending on gender. For example, a meta-analysis showed that although women tend to smile more than men in the United States, this sex difference is larger among Caucasians than all other ethnic groups (LaFrance, Hecht, and Paluck 2003). This is in line with European Americans' higher endorsement of gender stereotypes about emotions (e.g., expressing more stereotypes than other ethnic groups such as African, Hispanic, Asian Americans; Durik et al. 2006). However, studies documenting the differential effects that parent or child gender has on emotional socialization in diverse cultural groups are limited, given that a large body of research has primarily focused on White children (Chaplin 2015).

Among the few studies examining gender and culture interactions, Nelson and colleagues (2013) found that African American mothers of boys (vs. mothers of girls) reported more non-supportive behaviors toward negative submissive emotions (e.g., fear, sadness) and perceived more negative social consequences of children's expression of negative emotions. Similarly, Brown, Craig, and Halberstadt (2015) compared African American, European American, and Lumbee Native American parents' emotional expressiveness and their reactions to children's negative emotions. Controlling for socioeconomic status, they found that European American mothers reported more supportive reactions (than did fathers) to sons' negative emotions, but African American mothers of boys showed less supportive reactions than did fathers. However, regardless of ethnic membership, mothers of girls were more supportive than were fathers of girls. Controlling for mothers' education and family income, Daga, Raval, and Raj (2015) found a gender effect on mothers' awareness of children's emotions among an Indian immigrant sample, such that mothers of girls (vs. boys) reported more awareness, although this effect was not significant in a White American sample. As findings vary by culture and depending on parent and child gender, these studies underscore the need for more systematic research on emotional socialization in varying family contexts.

4.2 Other interpersonal relationships

Sociocultural forces such as display rules influence one's emotional processes starting early in life. Once internalized, display rules can guide emotion expression (Chaplin 2015) beyond

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parent-child and sibling relationships into broader adult interpersonal interactions. Safdar and colleagues (2009) evaluated emotional display rules across cultures by assessing judgments of appropriate behavioral responses to target emotions in hypothetical situations. Given that masculinity norms are higher in Japan (vs. Canada and the United States), the authors expected that compared to participants from North American countries, Japanese men would express more powerful emotions such as anger and Japanese women would express more powerless emotions such as sadness and fear. However, powerful emotions were found to be more permittable in the North American countries than in Japan. Additionally, men from all three cultural groups displayed more powerful emotions than women, and women in all three cultural groups displayed more powerless emotions than men. These results shed light on how display rules can be consistent across gender yet still vary within culture.

Factors related to gender stereotypes embedded within culture, rather than biological sex, may be informative in characterizing the interplay between culture and gender in emotion expression. For instance, Fischer et al. (2004) examined gender empowerment (i.e., GEM; the extent to which women take on important economic roles and political status) in 37 countries. They found that men in high-GEM countries (mostly Western European countries) reported experiencing less intense powerless emotions (e.g., fear, sadness) compared to men in low-GEM countries (mostly African, Asian, and South American countries). This suggests that although gender equity is higher in these countries, gender-stereotyped norms about men's emotional behaviors (e.g., men presenting less sadness) still hold for powerless emotions. Furthermore, although the frequency of behaviors like crying was higher for women (vs. men) in general, women reported more frequent anger expression in high-GEM countries.

Though beyond the scope of our selective review, other evidence comes from studies investigating the interaction of gender and culture in emotion sharing (Singh-Manoux 2000), emotion recognition (Merten 2005), emotion regulation (Davis et al. 2012), non-verbal emotion expressions/experiences (Bagozzi, Wong, and Yi 1999; Kitayama, Mesquita, and Karasawa 2006; Schimmack, Oishi, and Diener 2002; Vrana and Rollack 2002), and emotional support seeking (Burleson 2003; Ryan et al. 2005). These complementary topics illustrate the richness of the many interpersonal processes that support the communication of emotion.

5 Recommendations for future research

Compelling research thus far can speak to the ways in which emotions are communicated by the expressor (emotion expression and experience) and the receiver (emotion understanding and perception), as well as how each process operates differently within gender and cultural contexts. A thorough and impressive body of research has utilized naturalistic settings to capture parent-child, sibling, and peer interactions and may serve as a useful model for future researchers in extending this work into more diverse populations (e.g., Brophy and Dunn 2002; Hughes and Dunn 1998; Leach, Howe, and Dehart 2017). However, we see many new avenues for extending this pursuit that will enhance the conceptual and methodological elements of work in this area. In addition to traditional observational stud-

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ies of communication within the family, new ambulatory tools aid in our attempts to capture naturally occurring communications in more diverse situations. Additionally, as forms of emotion communication increasingly take place online and through social media, methods that are positioned to capitalize on those interactive contexts will be imperative for advancing our understanding of emotion communication. We also note the utility of longitudinal designs, to assess how gender and culture together influence emotional communication over time and development, and we encourage researchers to consider using big- and/or shared-data sets for initial testing and then transitioning into smaller-scale, observational and experimental designs to capture rich nuances in the development of emotion communication.

5.1 Conceptual directions

Research has made important inroads to understand the interplay between culture, gender, and emotions. However, three gaps need to be filled to advance knowledge in the field of emotion communication. First, we have a wealth of information from research based on mother-child interactions, but greater examination of the ways in which emotions are socialized with other caregivers and socializing agents (e.g., peers, teachers, fathers, siblings) will be beneficial. Second, detailing individuals' experiences with subcultures (e.g., religion, socioeconomic status [SES]) embedded within nationality is a natural next step. Third, because gender is socialized, a more nuanced approach to conceptualizations of gender will add to our understanding of gender as a cultural construction that is separate from biology.

Researchers have called for more research investigating the interaction between ethnicity or cultural contexts and gender (Chaplin 2015; Friedlmeier, Corapci, and Cole 2011). Most studies investigating the impact of gender and culture on emotion communication have investigated mother-child relationships (Raval and Walker 2019). Future studies should evaluate the impact of gender and culture interactions to elucidate how emotions are socialized and communicated differently between fathers, mothers, and other individuals in a child's life (extended family, teacher, siblings) and throughout the adult lifespan. For instance, children learn to manage their expression and understanding of emotion with siblings through shared experiences, engaging in fantasy play, and regulating emotions after conflict or relational aggression (Kramer 2014). Limited empirical research on triangulation (e.g., the child forms an alliance with a parent that pits the parent against a sibling) suggests that a child's attempt to align with a parent and exclude a sibling is an opportunity for parents to teach about emotion understanding and perspective taking (Kramer 2014). As we discussed differences in the socialization of emotion understanding that vary by gender and culture, examining these constructs in the context of sibling interactions and parent-child triangulation may be a fruitful pursuit.

As suggested by Vrana and Rollock (2002) many years ago, we still have not fully unpacked cultural variation that exists *within* nationality or ethnicity. Within each culture exists subcultures (e.g., class, SES, religion; Oysterman 2017). For example, in the United States, high arousal positive emotions have been found to be more valued by Christians,

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while low arousal positive emotions more valued by Buddhists (Tsai, Miao, and Seppala 2007). This suggests that cultural factors other than those related to ethnicity may play an important role in shaping emotional processes of individuals. Such investigations into subcultures within cultures and across cultures can provide more nuanced insight into the effects of gender and culture on emotion communication. One important avenue is a consideration of racial bias and discrimination, as both can affect parents' emotional socialization practices and children's emotional development (Dunbar et al. 2017; Odom et al. 2016).

Future studies will also need to consider the growing disparity between biological sex and gender identity. The wording of specific basic demographic questions (e.g., asking about sex or gender) may yield different patterns of associations with other constructs. Even self-reports of gender can force a binary choice, but more current thinking challenges the idea of gender as a binary variable (e.g., Hyde et al. 2019). Future studies may wish to characterize gender as two or more orthogonal bipolar spectrums, or assess specific gender identity categories (e.g., cisgender, agender, genderqueer). Researchers ought to consider refocusing explorations of gender to exclude biological sex and focus only on the socialized, psychological representations of gender norms (e.g., power/dominance, nurturance/caregiving).

5.2 Methodological directions

Studies of interpersonal emotion communication, as in general studies of communication, can be enriched by using methods that assess interpersonal interactions in real-world, moment-to-moment contexts (e.g., experience sampling method; Burgin et al. 2012). Use of the Electronically Activated Recorder (EAR) technique for recording conversation is particularly well-suited to capture real-world communication of emotions in a naturalistic setting (Mehl and Robbins 2012). Using a portable voice recorder worn by participants, the EAR provides brief intervals of audio samples of people's real-world conversations in naturalistic environments (Mehl et al. 2001). The ecological validity of the EAR is superior to that of in-lab paradigms, which are limited by factors like demand characteristics that may be related to gender and culture. Tools like the EAR can also identify differences in the frequency with which emotions are discussed; in-lab assessments do not typically assess this without relying on retrospective reports of daily life.

A particularly important area for future research is to continue exploring the use of technology in the communication of emotion. Other researchers we have already discussed are using these platforms effectively (Hwang 2014; Markman and Oshima 2007; Park et al. 2013; Wolf 2000). Focusing on aspects of technological communication addresses larger socio-emotional trends, not just contextualized features of particular technological formats. For example, Wondergem and Friedlmeier's (2012) analysis of yearbook photographs from kindergarten to 12th grade used a novel approach to reveal findings about the developmental period when gender differences in smiling emerge. With rapidly changing platforms for social media, introduction of new emojis, and the wax and wane of specific modes of communication (e.g., blogs, memes), researchers should focus on the properties and values

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within the communication (e.g., affect, motives, personality), rather than platform-specific investigations that will have limited generalizability (e.g., Instagram users are different from Facebook users). Technology-based communications may represent its own cultural niche that interacts with more traditional definitions of culture. The ecological validity of such methods allows for conclusions that cannot always be inferred from in-lab studies.

As mentioned, a thorough analysis of the interaction of gender and culture on the communication of emotions often benefits from a developmental perspective into the socialization of gender, culture, emotions, and emotion language. As such, future studies should utilize longitudinal designs to capture changes that may follow non-linear trends. For example, we may expect to see differences in how children communicate emotions when their primary conversation partner is their caregiver (in earlier childhood) versus increasing emphasis placed on peer relationships (in later childhood and adolescence). To investigate dynamic systems at play during the development of emotion communication and to capture specific processes, intensive longitudinal data can be utilized, with a variety of analytic approaches (e.g., time series analysis; Hamaker et al.2015). One important approach to investigate relationship quality between socializing agents and a child is to examine the bidirectional or reciprocal relationship in emotional socialization. For example, analysis of transactions in emotions between a socializing agent and a child (Mancini, Luebbe, and Bell 2016) or contingencies between dyadic emotional behaviors (Lobo and Lunkenheimer 2020) might be fruitful. We will be able to more clearly identify the causal mechanisms that affect the interaction of gender and culture by implementing more experimental designs that can explore the values we place on the expression of emotion, or the specific language used to express emotions. After fine-tuning ideas and substantiating theories, smaller, more dynamic, naturalistic, qualitative, or longitudinal designs can be implemented to capture richer interpersonal experiences.

Other avenues that may be pursued are the use of both online/big, and small/rich datasets, as each has a time and place in advancing our understanding of emotion communication. Utilizing online and big data methods can allow researchers to conduct large studies in populations that they may not have access to without collaborators in other countries. Though there are inherent limitations in the use of online techniques for collecting data (e.g., Amazon's Mechanical Turk), they represent quick and inexpensive methods to strengthen self-report and can serve as a way to gain initial pilot data. Collecting data online can afford researchers the ability to assess large samples of participants in multiple countries simultaneously.

Also fruitful are budding opportunities to repurpose the wealth of data collected thus far in other studies. For example, data-sharing websites such as The Love Consortium (https://www.theloveconsortium.org/) offer the opportunity to examine emotion-related data captured within relationship interactions. Affectiva, an emotion recognition technology company, is pioneering the use of big data in affective science using nearly 5 million facial expressions from 75 countries (Greene et al. 2020). As there is no such thing as a completely neutral observer (Kappas 1991), utilizing artificial intelligence methods with big data can offer an opportunity to explore the communication of emotions without the impact of the observer's (researchers or coders) gendered or cultural biases. Emotion recognition technology and data-sharing websites can be used to maximize collaborations and idea sharing between researchers in various countries.

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6 Conclusions

As we have highlighted in this chapter, beliefs and expectations tied to cultural and gender norms affect emotion communication. Thus, a consideration of gender and culture is critical to understand the communication of emotion. Conceptualizations of gender and culture need to be flexible to capture the dynamic interplay of these constructs over developmental and historical time, and research methodologies must continue to be creative and innovative to capture emotion communication as a function of these multifaceted social processes.

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X Developmental aspects of language and emotion

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42 Emotions in infants

1 Introduction
2 Theories of emotion knowledge development
3 Detection, discrimination, and recognition of emotions in infancy
4 Speech and socioemotional interaction
5 Summary and future directions
6 References

Abstract: Emotion theories differ with respect to both the formation of emotion categories (e.g., innate vs. constructed) and the role of language in emotion representation. This chapter will discuss how infant research can inform these debates, illustrate what is currently known about infants' perception and integration of emotion information across multiple sources (faces, bodies, and voices), and discuss current understanding of the interaction between language and emotion knowledge development. During the first year, infants transition from merely detecting and discriminating to recognizing emotions, and to using the emotion expressed by others to guide their behavior. Infants also learn about objects through socioemotional cues, such as whether to approach an unfamiliar toy or by discovering the label for an object highlighted through the highly positive infant-directed speech characteristically used by caregivers. Therefore, through emotion, infants learn about the world around them, including how to successfully communicate and engage in appropriate behaviors in various situations. Findings suggest that language is not a necessary precursor for basic emotion perception. However, sophisticated representation of emotion is not available at birth or soon thereafter but is influenced by experience and learning during the first year of life.

1 Introduction

Theories differ on the ways in which adults come to represent emotion. One primary difference concerns the role of language, with some theories suggesting that language is a necessary precursor to the development of emotion understanding, while others contend that knowledge of emotions, at least of basic categories, is independent of language. At the same time, research on topics such as infant-directed speech demonstrates that emotion can facilitate language development, suggesting a synergistic relationship between language and emotion. This chapter will discuss how infant research can inform these de-

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bates, illustrate what is currently known about pre-verbal infants' emotion perception, and suggest possible mechanisms for the development of early emotion-processing abilities.

Note that the focus of this chapter is on infants' perception of other people's emotional expressions, i.e., the outward changes in facial and bodily movements as well as the voice that are thought to represent internal emotional states (Lewis 2008: 310, 2011). Numerous reviews address other aspects of emotion research such as the experience and display of emotions in infancy (e.g., Camras and Fatani 2008; Camras and Shuster 2013; Izard, Woodburn, and Finlon 2010; Lewis 2008, 2011; Messinger 2002), which are outside the scope of this chapter. Furthermore, we will primarily focus on emotion knowledge development during the first year of life, with some studies extending into the second year.

2 Theories of emotion knowledge development

Two primary theoretical approaches to emotion differentiation are the *modular* approach and the *dimensional/constructivist* approach. The modular approach envisions emotions as discrete categories (e.g., Ekman 2016; Ekman and Cordaro 2011; Izard 1994), whereas the dimensional approach differentiates emotions based on pleasant-unpleasant and low-high arousal dimensions (Russell 1980). A major point of contrast between these two approaches concerns whether emotions are "natural kinds" that are somehow hardwired (i.e., "basic" emotions in the modular approach [Ekman and Cordaro 2011; see also Izard 1994]) or whether emotions are constructed through experience and conceptual development (in the dimensional/constructivist approach [Widen 2013; Barrett 2006a, 2006b, respectively]).

Specifically, in the modular approach endorsed by Ekman and colleagues (Ekman and Cordaro 2011), there is thought to be a limited set of basic emotions that are both discrete and universally shared across cultures: anger, fear, surprise, sadness, disgust, contempt, and happiness. Each basic emotion has a distinctive cluster of features associated with it (e.g., facial configuration, physiological changes) that separates it from other emotions. Basic emotions are thought to have evolved as a result of adaptation. For example, it is evolutionarily advantageous for an individual to be able to respond quickly to expressions of threat, so one must be able to distinguish this emotional expression (e.g., anger) from other emotions and react accordingly from early in life. Failure to do so may result in injury or death.

Although Ekman does acknowledge the role of social learning, culture, and personal experience in emotion representation, he and his colleagues (e.g., Ekman 1992; Ekman and Cordaro 2011) have argued that there is evidence for a set of basic universal emotions. Support for this idea has been found for both facial (see Ekman et al. 1987; Ekman, Sorenson, and Friesen 1969; Izard 1994; Sauter and Eisner 2013) and vocal emotions (Laukka et al. 2013; Sauter et al. 2010; Scherer, Banse, and Wallbott 2001). Ekman and Cordaro (2011) have also endorsed the idea of an affect program, characterized by a central mechanism that organizes our responses to emotions and is influenced by our evolutionary and personal history.

Specifically, the modular approach predicts sensitivity to basic emotions early in life. In contrast, the dimensional and constructivist approaches do not predict sensitivity to

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emotion categories early in life because they assume that emotion categories are socially constructed, require conceptual knowledge (see Barrett 2006a), and are culturally specific (e.g., Brosch, Pourtois, and Sander 2010) rather than universally recognized (also see Jack et al. 2012). For example, because of immature language skills and conceptual knowledge, young children tend to have a limited repertoire for describing emotions and may use "happy" to refer to anything positive or "sad" to refer to anything negative (Widen and Russell 2003, 2008). Similarly, Barrett, Mesquita, and Gendron (2011) say that emotion categorization is contextually dependent, with the stimulus-based context (e.g., modality), the perceiver-based context (e.g., top-down cognitive processes), and the cultural context all playing a role (also see Barrett, Lindquist, and Gendron 2007). However, as with Ekman and Cordaro's (2011) acknowledgment of the importance of social learning on emotion representation, Barrett (2006a, 2012) also acknowledges that evolutionary adaptation and biological factors impact emotion representation.

Researchers supporting the idea that conceptual development enables emotion knowledge (that result in culturally specific "constructed" emotion categories) suggest that language plays a key role during the developmental process (Barrett 2006a; Brosch, Pourtois, and Sander 2010; but see Sauter, LeGuen, and Haun 2011). For example, a mother providing an emotion label to her child following some instance of a particular behavior provides that child with information about that term and how it relates to that particular instance of behavior, as well as past instances of behavior labeled with the same term. In this sense, language is said to play a key role in the conceptual development of emotion knowledge (Barrett, Gendron, and Huang 2009; Barrett, Lindquist, and Gendron 2007; Lindquist, Satpute, and Gendron 2015). This idea is supported by studies in which language influenced adults' perception of emotions in faces (e.g., Lindquist et al. 2006). In contrast, Ekman and Cordaro (2011) specifically argue that language and emotion are independent (i.e., language is socially constructed, whereas knowledge of basic emotions is not).

Importantly, Walker-Andrews (1997) proposed a model that takes into consideration both innate tendencies and experience. She acknowledges that early perception of emotion may solely be due to sensitivity to featural differences (e.g., toothiness in smiles, pitch contours in speech), but also posits that recognition of the emotional content of faces, bodies, and voices occurs within the first year due to both maturation and experience with multimodal information in naturalistic interactions (Walker-Andrews 1997). This is a middle-ground approach that takes into account both the universal features signifying particular emotions as proposed by the modular approach as well as the emphasis placed on experience and socialization by the dimensional and constructivist approaches. This theoretical debate can be informed by research on the nature of emotion representation in infancy.

3 Detection, discrimination, and recognition of emotions in infancy

According to Walker-Andrews (1997), there are three levels of emotion perception organized in a hierarchical structure: *detection, discrimination,* and *recognition*. Detection, the

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most basic level of emotion perception, refers to simply being physically able to hear, see, or feel an emotion expression. For example, can an infant physically see the features that signal joy in his/her mother's face? Without detection, it would not be possible to proceed to the next level, discrimination, which involves distinguishing between two emotions. This requires more effort, as it involves an active comparison between two or more stimuli. The final level of emotion perception is recognition, which builds upon the previous two levels of detection and discrimination. Emotion recognition requires that an individual is able to interpret emotional information from different sources (e.g., face, voice, body) and reliably exhibit some level of understanding of the underlying affect (Walker-Andrews 1997, 1998). Emotion recognition implies some deeper level of understanding, as it requires infants to detect commonalities across multiple exemplars (e.g., categorization) or modalities (e.g., intermodal matching), or to react consistently and appropriately on the basis of a particular emotion (e.g., social referencing; attentional engagement).

A number of experimental paradigms have been used to test infants' emotion perception. One frequently used paradigm is the visual paired-comparison test (Fagan 1974), which often includes a familiarization or habituation period. For example, in an infant-control habituation paradigm, infants are repeatedly exposed to a particular stimulus, say a fearful face, until they reach a habituation criterion, which generally means that infants have sufficiently encoded the stimulus. Following habituation, infants would then be presented with the familiar image and a novel emotional image, the familiar fearful face and a novel happy face, for example. A novelty preference would suggest that infants discriminate between the two emotions.

Infants' spontaneous preference for a particular stimulus can also be tested in a similar manner, albeit without a preceding familiarization or habituation period. For example, infants may be presented with two faces side-by-side (e.g., fearful vs. happy). If infants fixate on one face longer than what would be expected by chance (50 %), then this suggests that infants have an a priori preference for that emotion and that they discriminate the fearful face from the happy face.

Finally, infants' emotion perception is sometimes tested using the intermodal preference technique (Spelke 1976), in which infants are typically presented with two side-by-side faces or bodies (e.g., a fearful face and a happy face), while a vocal emotion (e.g., a fearful voice) plays simultaneously. If infants look longer at the matching image, this suggests that they recognize the common emotion across modalities (auditory and visual). Similarly, infants can be tested on their ability to match across visual sources (faces and bodies [see Hock et al. 2017]). Successful matching across modalities or sources is evidence of a higher level of emotion perception; specifically, this would suggest some level of recognition according to the Walker-Andrews (1997) model, though it does not mean that infants have attained adult-like levels of understanding.

The following sections will summarize some of the research on infants' emotion perception across different sources and relate these findings back to the theories of emotion development. We will outline key findings that address Walker-Andrews' (1997) hierarchy of emotion perception across different modalities, ending with the final step of emotion recognition. Furthermore, we will discuss the possibility that infants' emerging emotion perception skills influence language development.

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3.1 Visual emotion perception

The most salient source of emotion information is typically the face. Accordingly, the vast majority of research on emotion perception in infants and throughout the lifespan focuses on facial emotions. However, a growing number of studies have begun investigating the perception of body emotions in infants. Being able to detect, discriminate, and recognize emotions in both sources (faces and bodies) are vital skills for infants' successful navigation of their social world. Key findings from this area are summarized below.

3.1.1 Detection and discrimination of visual emotions

This section will present evidence for infants' ability to detect and discriminate certain emotions. Once again, detection is the most basic level of emotion perception in the Walker-Andrews (1997) model, and it refers to simply being physically able to hear or see an emotion expressed by another person. The following step in the Walker-Andrews (1997) hierarchical model – discrimination – builds upon the ability to detect emotion information and requires a more active comparison between two or more emotional stimuli. Therefore, evidence of discrimination at a particular age necessarily implies evidence of detection as well.

Despite limitations in newborns' visual acuity, Farroni et al. (2007) report that newborns discriminate between happy and fearful faces but fail to discriminate fearful from neutral expressions even following a habituation period. The fact that newborns were only able to discriminate between the two oppositely valenced emotions implies that distinguishing between two emotions varying widely on the pleasant-unpleasant spectrum may be an ability that is available early in development, whereas more subtle differences (emotion vs. neutral) may be more challenging. This aligns with Russell's (1980) dimensional model which assumes that only the positive/negative dimensional contrast is available early in life.

In general, infants discriminate between positive and negative facial emotions consistently by 6 months of age (Soken and Pick 1992, 1999; for reviews, see Quinn et al. 2011; Walker-Andrews 1997), though some studies have found evidence of discrimination at earlier ages (Farroni et al. 2007; Serrano, Iglesias, and Loeches 1992, 1995). Recent studies have also shown that 5- to 8-month-old infants discriminate between emotional bodies (Heck et al. 2018; Missana et al. 2014; Zieber et al. 2014a, 2014b), but 3.5-month-olds fail to discriminate between oppositely valenced bodies on the basis of emotion (Heck et al. 2018). This failure to discriminate even oppositely valenced emotions in bodies at 3.5 months in Heck et al. (2018) suggests that infants do not perceive discrete emotions across all sources (faces, bodies, voices) from birth, as would be predicted by a strong version of the modular theory that assumes innateness (Ekman and Cordaro 2011; Izard 1994). Furthermore, given that these studies only looked at oppositely valenced emotion contrasts, the findings do not answer the question of whether perception of emotion categories within each of the positive/negative classes develops rapidly early in life or develops as a function of extensive experience and maturation.

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Although research on within-valence discrimination is limited, a number of studies have found successful discrimination of emotions within the positive and negative valences. Using a naturalistic peekaboo paradigm, Montague and Walker-Andrews (2001) found that 4-month-olds successfully discriminate not only between-valence contrasts (happy vs. fearful; happy vs. angry), but also within-valence contrasts (sad vs. angry; sad vs. fearful). Additionally, Schwartz, Izard, and Ansul (1985) found successful discrimination among several within-valence contrasts in 5-month-olds; specifically, infants exhibited novelty preferences to the novel emotion (fearful, sad) when first familiarized to fearful, sad, or angry expressions. Infants also demonstrated an inversion effect, in that they no longer discriminated when the faces were presented upside-down. Similarly, Soken and Pick (1999) concluded that 7-month-olds discriminate between angry and sad expressions due to their ability to intermodally match these expressions across faces and voices, as will be described further below. Finally, Ruba et al. (2017) found evidence of 10- and 18-month-olds' ability to both discriminate between and perceptually categorize facial expressions of anger and disgust, which are both negative and highly arousing emotions.

Together, these studies show that infants discriminate among emotions within a particular valence starting quite early in life. This suggests that differentiation of discrete emotions does not require language, as posited by some (Barrett, Lindquist, and Gendron 2007; Lindquist, Satpute, and Gendron 2015; Widen and Russell 2008). However, there is no evidence that emotion categories within each of the positive and negative valence classes are discriminated at birth, as would be predicted by strong versions of the modular theory. Thus, the empirical findings provide support for a middle ground, such as the view by Lewis (2008: 314–317), which suggests that infants acquire knowledge of discrete emotion categories by 6 months of age due to experience and/or maturation. These findings also support Walker-Andrews' (1997) view that increased exposure to emotions via social experiences in infancy leads to an increased awareness of emotional content.

Although it is important to track infants' ability to discriminate among discrete emotion expressions, discrimination only means that infants can distinguish one emotion from another; it does not necessarily imply an understanding of the meaning of emotions (Walker-Andrews 1997). The following sections will outline some key findings that indicate some level of emotion recognition in infants.

3.1.2 Recognition of visual emotions

Recall that the third and final level of emotion perception in Walker-Andrews' (1997) model is recognition, which involves some understanding of the affect underlying emotions. Emotion recognition can be assessed via intermodal matching tasks, as infants must recognize the correlations between emotional information expressed across more than one modality (e.g., visual and auditory), which requires them to go beyond the surface characteristics of emotion expression in each modality. Intermodal perception will be discussed in detail in a subsequent section on multimodal emotion perception. Recognition also requires sensitivity to commonalities across exemplars, which can be seen in research on emotion categorization (see Quinn et al. [2011] for a review). An additional index of emotion recognition

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is differential attention to particular emotions, such as threat-relevant expressions (see Vaish, Grossmann, and Woodward [2008] for a review). Key findings from these domains are summarized here.

3.1.2.1 Categorization of visual emotions

If infants categorize emotions, it indicates they are responding to some consistent aspect of the expression across exemplars, such as the configuration of features. This may provide support for the modular theory of emotion, as each expression would need to have some specific pattern of features to be able to be recognized as the same emotion across individuals and intensities. Therefore, if even pre-verbal infants show evidence of emotion categorization, it would suggest that language is not a necessary precursor for emotion representation at least at a basic perceptual level.

As indicated above, discrimination among certain facial emotions is evident relatively early in development, specifically between 3 and 6 months (but see Farroni et al. [2007] for evidence in newborns). Categorization is a more challenging task, but Bornstein and Arterberry (2003) found that 5-month-olds not only discriminate between happy and fearful expressions in the same and different individuals, but also that infants categorize different intensities of smiling in the same and different individuals. Additionally, 7-month-olds categorize morphed images of fearful and happy faces and have a significant preference for fearful faces (Kotsoni, de Haan, and Johnson 2001). However, there is some uncertainty about the exact age at which categorization is evident because Lee, Cheal, and Rutherford (2015) have found that 9-month-olds categorize happy/angry contrasts, but not happy/sad contrasts, while 6-month-olds fail in both cases. Regardless of the exact timing of infants' categorization of emotions, it is clear that they do so without verbal labels, suggesting that expressive language is not a critical precursor for emotion categorization.

Ruba et al. (2017) tested 10- and 18-month-olds' ability to categorize facial expressions of anger and disgust. Importantly, these emotions not only share the same negative valence, but also the same high arousal level. This allows for a direct test of whether infants perceive discrete emotions on the basis of the emotional content rather than differences in valence or arousal level. Furthermore, Ruba et al. (2017) chose these age groups to explore the role of both experience (e.g., motor development) and language; specifically, 18-month-olds are on the cusp of the vocabulary spurt milestone and therefore may have more experience with emotion language. Successful discrimination and categorization at 10 months would support the idea that language is not necessary for emotion recognition, whereas failure would support the dimensional/constructivist approaches taken by Widen and Russell (2008) and Barrett and colleagues (Barrett, Lindquist, and Gendron 2007; Lindquist, Satpute, and Gendron 2015).

Following habituation to one emotional expression (anger or disgust) by four individuals, 10-month-olds exhibited a significant preference for a novel expression but only if it was expressed by one of the actors seen during familiarization (Ruba et al. 2017). In contrast, 18-month-olds exhibited significant preferences for the novel expressions whether or not they were expressed by one of the actors seen during familiarization. These findings suggest that both age groups perceptually categorize angry and disgusted expressions, but only 18-month-olds concurrently categorized both emotion expression and identity infor-

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mation. The authors suggest that the results demonstrate successful categorization by 10 months on the basis of perceptual features, but they do not claim that infants have conceptual knowledge of within-valence emotions.

More recently, White et al. (2019) found that infants as young as 5 months of age are sensitive to the categorical boundaries between sadness and disgust, happiness and surprise, and sadness and anger. Infants in this study attended more to stimulus comparisons that crossed a categorical boundary than to comparisons that did not, even when controlling for the degree of difference between images. This evidence of categorical perception reveals that many emotion categories are differentiated quite early in life.

Thus, language is not necessary for at least some basic level of emotion recognition. However, categorization alone is not necessarily an indication of the understanding of meaning of emotions because infants may be classifying stimuli based solely on perceptual characteristics (Ruba et al. 2017) rather than due to conceptual knowledge of those emotions. Other types of experimental paradigms may provide stronger support to the notion that infants are sensitive to the meaning of different emotional expressions.

3.1.2.2 Differential attention to visual emotions

If infants demonstrate some systematic pattern of responding to the presence of particular emotions, then it may indicate some understanding of (or at least preparedness for understanding of) that emotion's functional importance. This, too, would provide evidence for emotion recognition according to Walker-Andrews' (1997) model. For example, if an infant is aware of the signal value of a fearful face, they may respond by being more vigilant or attentive when that face is present. This is, in fact, what has been found across several studies.

One popular way to measure infants' differential attention to emotional faces is to use the attention overlap task (Peltola et al. 2008). In this task, an emotional face (e.g., happy or fearful) is presented on the center of the screen; after a period of time, a peripheral distractor (e.g., a flickering checkerboard) appears. Both the face and checkerboard remain on the screen for a period of time, known as the overlap period. The idea is to determine whether infants are more or less likely to disengage from the face and shift their attention to the distracter depending on the emotion. In studies using static faces, 7-month-olds but not 5-month-olds were less likely to disengage from fearful expressions than from happy expressions (Leppänen et al. 2010, 2011; Peltola et al. 2009, 2013, 2015; Peltola, Leppänen, and Hietanen 2011). However, when tested with dynamic faces, even 5-month-olds, but not 3.5-month-olds, respond differentially to upright fearful faces compared to happy or neutral faces, but not when the faces were inverted (Heck et al. 2016, 2017). One possible explanation for this fear bias is that infants find fearful expressions to be novel (Barrett, Lindquist, and Gendron 2007); however, the fact that the younger infants did not attend longer to fearful faces in Heck et al. (2016) suggests that novelty is an unlikely explanation as fearful faces would have been even more novel at 3.5 months than at 5 months. Moreover, Peltola et al. (2008) explicitly contrasted infants' responses to fearful and novel stimuli and found no supporting evidence to suggest that novelty underlies infants' responses to fearful stimuli. These findings thus suggest that by 5 months, infants' attention is systematically engaged

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by fearful faces, which in turn indicates at least some rudimentary understanding (or at least *preparedness* for understanding) of the functional value of emotions quite early in life.

Based on the studies reviewed above, even pre-verbal infants show robust emotion perception skills when viewing faces, suggesting that infants differentiate among emotions much earlier than what would be predicted by the dimensional approach (Widen and Russell 2008). However, it is also imperative that infants be able to detect, discriminate, and recognize emotions in the vocal domain. This is particularly true when considering situations in which a parent must communicate with his or her infant when out of their line of sight.

3.2 Vocal emotion perception

Barrett, Lindquist, and Gendron (2007) have suggested that language-driven conceptual understanding is essential for emotion knowledge development. For example, being exposed to the label "anger" attached to many exemplars would be one way in which an individual can develop knowledge that allows them to categorically compare and contrast that emotion from others. Beyond such semantic knowledge, emotion and language also intersect via the emotional prosody of speech. That is, the manner in which speech is uttered can convey emotions.

As described above, Walker-Andrews' (1997) model of emotion perception has three levels arranged hierarchically – detection, discrimination, and recognition. As with visual emotion stimuli, the development of sensitivity to emotions in vocal stimuli may follow this pattern. Therefore, the following section will outline key studies on infants' perception of vocal emotion.

3.2.1 Detection and discrimination of vocal emotions

Studies examining infants' detection of vocal emotion, the first level in Walker-Andrews' (1997) hierarchy, have employed various dependent measures of physiological or behavioral responding. The vocalizations chosen also vary in that some studies use non-verbal sounds, such as crying, laughing, and coughing, as their emotional vocal stimuli, while others have used actual words that vary in emotional prosody.

Newborns in Cheng et al. (2012) exhibited heightened event-related potential (ERP) amplitudes to happy spoken syllables compared to happy synthesized sounds. Furthermore, this amplitude was even higher for fearful and angry syllables compared to neutral or happy syllables. This study demonstrates that even days-old infants are sensitive to voices and discriminate among vocal emotions. The authors discuss the heightened response to the negative emotions (fear and anger) as being evolutionarily adaptive, which provides support for the modular approach endorsed by Ekman and Cordaro (2011) and Izard (1994).

Similarly, using ERP measures, Zhang et al. (2014) found that newborns discriminated between fearful and angry voices. Although the authors are careful not to interpret this result as evidence that even days-old infants are recognizing the emotional content of the

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voices, this study does at least provide evidence of infants' rudimentary ability to detect and discriminate among vocal emotions even within the negative valence. Sensitivity to the differences in two threat-related emotions in newborns provides further support for the modular approaches proposed by Ekman and Cordaro (2011) and Izard (1994).

Interestingly, Blasi et al. (2011) found that 3- and 7-month-olds' responses in a functional magnetic resonance imaging (fMRI) study were significantly greater for sad vocalizations compared to neutral vocalizations in the insula and orbitofrontal cortex, which are areas associated with emotion processing in adults. In contrast, there was no difference in responding for happy vocalizations compared to neutral vocalizations. The authors posit that this heightened attention to sadness may be a result of infants' relative unfamiliarity with adults' crying compared to laughing (happy) or coughing/sneezing (neutral) rather than recognition of the negative emotional content of the sad vocalizations. They further hypothesized that infants with older siblings or who attend daycare may be more familiar with nonverbal sounds of other infants or children crying, which may result in a different pattern of results from what was found with adult crying sounds. However, Missana, Altvater-Mackensen, and Grossmann (2017) found that 8-month-olds exhibited more negative N200 responses to infant crying sounds compared to infant laughing and adult neutral sounds (humming), suggesting an early processing sensitivity to auditory sounds of crying in peers. Additionally, Crespo-Llado, Vanderwert, and Geangu (2018) found that 8-month-olds also had heightened activation in two ERP components (N100 and the late positive complex; LPC) to other infants' crying sounds compared to infants' laughing and coughing sounds. The findings from both these studies suggest that the explanation by Blasi et al. (2011) that infants respond to sad vocalizations due to their relative lack of familiarity with adult crying sounds may not be supported. Instead, it would seem that infants are particularly sensitive to crying sounds, especially from their peers.

Several experiments by Grossmann and colleagues have examined infants' brain responses to emotional prosody (e.g., Grossmann et al. 2010; Grossmann, Striano, and Friederici 2005). Grossmann, Striano, and Friederici (2005) tested 7-month-old infants on multiple words from three emotion categories: happy, angry, and neutral. Infants' ERPs indicated heightened attentional resources being used for angry voices. Furthermore, infants exhibited a positive slow wave to both happy and angry voices, implying that emotional vocalizations are processed more deeply than neutral vocalizations. Using near-infrared spectroscopy (NIRS), Grossmann et al. (2010) found that 7-month-olds had an increased response to angry and happy prosody compared to neutral prosody, and the localization of responses to different emotional prosodies also differed.

These studies indicate not only that emotional speech affects neural processing early in life, but also that infants discriminate among vocal emotions differing in emotional valence. Also, as noted above, there is some evidence that even newborns can discriminate within-valence emotion expressions (Zhang et al. 2014), but it is unclear whether they are doing so on the basis of the emotional content or some other aspect of the stimuli. This question needs to be addressed in future studies to distinguish between the modular and dimensional approaches. Discrimination within valence early in life would support the modular approach, while failure to discriminate would be more consistent with the dimensional/constructivist approaches.

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3.2.2 Recognition of vocal emotions

As is the case with visual emotion perception, it is also possible to test infants' recognition of vocal emotions. However, the number of published studies focusing specifically on unimodal vocal emotion recognition in infancy is limited, especially addressing development during the first year of life. Nonetheless, it is important for future studies to investigate the development of infants' recognition of auditory expressions of emotion, as this ability could be considered evolutionarily important. For example, infants need to be able to react solely to a parent's vocal expression of fear if they are approaching a dangerous situation (e.g., stairs) and are unable to see the parent's facial expression.

In fact, 12-month-olds were found to be particularly responsive to fearful vocalizations compared to fearful faces in a social referencing paradigm (Mumme, Fernald, and Herrera 1996; see Section 3.2 for additional social referencing studies). In other words, a fearful voice alone was sufficient in changing infants' behavior towards a novel toy. Moreover, there is some evidence that infants can categorize vocal emotions using a habituation familiarity-novelty preference paradigm (Soderstrom et al. 2017), suggesting recognition of vocal emotions.

3.2.2.1 Categorization of vocal emotions

Recall that infants categorize emotions in visual stimuli within a valence class. Similarly, infants also categorize vocal emotions of the same valence. Soderstrom et al. (2017) tested 3-, 6-, and 8-month-olds' categorization of positive vocal emotions (e.g., sighs of relief vs. cheers). Each infant was habituated to an individual speaker's expressions of relief (i.e., sighs) or triumph (non-linguistic cheers). Infants heard multiple exemplars of the emotion during habituation (e.g., triumph) and heard a novel exemplar of the familiar emotion during test as well as an exemplar from the novel emotion category (relief). Both the 6- and 8-month-olds exhibited heightened attention to novel stimuli, indicating categorization of relief/triumph in vocalizations. However, 3-month-olds failed to categorize.

To our knowledge, no other published study focuses on infants' ability to categorize auditory expressions of emotion. As mentioned above, it is important for additional research to be conducted in this area, particularly with respect to the development of infants' ability to recognize within-category negative emotions that are evolutionarily important (e.g., fear, anger).

3.3 Multimodal emotion perception

To this point, we have tracked the development of infants' perception of unimodal expressions of emotion (faces, bodies, voices). Although it is important that infants quickly and effectively process information from a single modality, it is much more likely that they will be exposed to emotion information across multiple sources in everyday life. This section outlines research on infants' ability to integrate emotion expressions across modalities (for a review, see Grossmann 2010).

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Infants in their daily lives are frequently exposed to situations in which they both see and hear emotion expressions. For example, when a mother is holding her infant, she may be smiling and talking to her infant in a happy voice. Additionally, Walker-Andrews and Lennon (1991) argue that being able to both see and hear an adult in social interactions may be particularly useful for infants' representation of emotion because the face may facilitate infants' attention to the voice (e.g., the face may act as a discriminative stimulus), while the voice alone may not be registered by the infant as a social interaction. What enables infants to be able to recognize that the emotion being expressed visually is the same as what is being expressed vocally? Do infants process emotions better when receiving information from more than one modality? The answers to these questions are important not only because of their significance to real-world functioning but also because intermodal perception is yet another way to demonstrate emotion recognition in the Walker-Andrews (1997) scheme, as it would require an infant to detect and respond to the commonalities in emotional content across modalities (Heck et al. 2018; Walker-Andrews 1997; Zieber et al. 2014a, 2014b). Furthermore, Ekman et al. (1980) suggested that the saliency of a particular channel (face, body, or voice) depends on the context of the interaction and that research does not support the belief that the face is the most important source of emotional information. Although the majority of studies have focused solely on the perception of facial expressions since that time, a number of studies have addressed multimodal emotion perception in infancy.

3.3.1 Intermodal matching

As noted above, intermodal matching (e.g., infants matching an angry voice to an angry face rather than to a happy face) is an index of emotion recognition in the Walker-Andrews (1997) model. In order to successfully match, infants must be capable of both detecting and discriminating vocal and visual emotions. Although the timing of the onset of this skill is not consistent across studies and depends on contextual information, infants around 5–6 months of age have been shown to be successful at matching voices to both faces (Vaillant-Molina, Bahrick, and Flom 2013; Walker 1982) and bodies (Heck et al. 2018; Zieber et al. 2014a, 2014b). Walker (1982) found that 7-month-olds match happy and neutral faces with the corresponding vocal emotion, even when the facial movements are asynchronous with the sound. Additionally, both 5- and 7-month-olds matched happy and sad faces and voices (but see Soken and Pick 1999). Finally, 7-month-olds successfully matched happy and angry faces with their corresponding vocal emotion (see also Soken and Pick 1992, 1999), but only when the faces were upright. Infants failed to match when the faces were inverted. Since the stimuli were identical in both conditions with the exception of orientation, this inversion effect indicates that infants were not matching based on some low-level feature present in the stimuli.

Infants also successfully match happy and angry emotions expressed by bodies (with faces obscured) to their corresponding vocal emotions by 5 months of age, but not at 3.5 months (Heck et al. 2018; Zieber et al. 2014a, 2014b). Body emotions are especially important when considering situations in which infants must detect emotional cues from a dis-

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tance. Infants in Heck et al. (2018) and Zieber et al. (2014a, 2014b) also demonstrated an inversion effect with bodies. This suggests that infants were not responding solely on the basis of movement or some other low-level feature present in the visual stimuli. Furthermore, infants match information across sources within the visual modality. For example, 6.5-month-olds match faces to bodies based on emotion (Hock et al. 2017). This also suggests that infants detect the commonalities of emotion information and integrate this information across multiple sources.

Soken and Pick (1999) reported that 7-month-olds successfully match in some emotion conditions (happy vs. interested; happy vs. angry; interested vs. angry; sad vs. angry), but not in others (sad vs. happy; sad vs. interested). Effects of familiarity might be an explanation for the varying success across contrasts. Some expressions (e.g., sad) may be less familiar earlier in life compared to others (e.g., happy, interested), leading to a discrepancy in the amount of attention allocated to each face. This may explain why infants failed to match in both the happy versus sad and the interested versus sad conditions (Soken and Pick 1999), as infants looked longer at the two most familiar emotions (happy, interested) in the two respective conditions compared to the least familiar emotion (sad).

Familiarity has also been used to explain developmental changes in intermodal matching. Five-month-olds match other infants' positive and negative emotions across faces and voices, but 3.5-month-olds do not (Vaillant-Molina, Bahrick, and Flom 2013). However, Kahana-Kalman and Walker-Andrews (2001) found that even 3.5-month-olds successfully match happy and sad facial and vocal expressions when viewing their own mother. When an unfamiliar woman was presented, however, infants failed to match. Montague and Walker-Andrews (2002) found this same pattern in 3.5-month-olds with happy, sad, and angry expressions, but infants also failed to match when viewing their own fathers or unfamiliar men.

Being able to detect emotions across modalities and understand what goes together is an essential skill for infants' survival. Based on the series of experiments presented here, infants as young as 3.5 months detect these commonalities across faces and voices (Kahana-Kalman and Walker-Andrews 2001) and by 5 months for bodies and voices (Heck et al. 2018). Although this still does not necessarily indicate an adult-like understanding of the meaning of emotions, it does indicate rather robust emotion recognition skills early in life. Thus, these findings argue against theories (e.g., Barrett 2006a; Widen 2013) that require extensive experience and conceptual development for the representation of emotion categories.

3.3.2 Intersensory redundancy

Another important aspect of multimodal processing is that of intersensory redundancy, the benefits associated with redundant emotion information presented across multiple channels (Flom and Bahrick 2007). In one experiment, Flom and Bahrick (2007) first habituated 3-, 4-, 5-, and 7-month-old infants to actresses expressing happy, angry, or sad emotions in bimodal (face + voice) synchronous videos and then tested infants with a different emotion. The 4- to 7-month-olds, but not 3-month-olds, discriminated changes in emotional audiovi-

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sual speech. Five-month-olds also benefit from having a face, as opposed to a checkerboard, accompany vocal expressions in a discrimination task (Walker-Andrews and Lennon 1991).

Previous studies testing the intersensory redundancy hypothesis (Bahrick and Lickliter 2004, 2012; Bahrick, Lickliter, and Flom 2004) suggest that having redundant information across modalities would benefit younger infants in a social referencing task. Vaillant-Molina and Bahrick (2012) tested 5.5-month-olds to see whether they react differently to emotions expressed bimodally (audiovisual) or unimodally (visual-only). This hypothesis was supported: 5.5-month-olds in the bimodal condition preferred to interact with the toy associated with the positive expression, but those in the unimodal condition did not demonstrate behavioral changes on the basis of emotion. Furthermore, 5-month-olds in Flom et al. (2014) demonstrated heightened memory for abstract shapes that had been paired with happy bimodal expressions, but not neutral or angry expressions.

Together, these studies demonstrate the importance of multimodal information for emotion perception, particularly for young infants. They also suggest that information from a single modality alone may not be enough for emotion identification in young infants. However, the way in which infants perceive emotions multimodally is still relatively understudied. Additional research into this question is needed, especially given the increased ecological validity of multimodal stimuli compared to unimodal stimuli.

4 Speech and socioemotional interaction

While the studies described so far speak to the unimodal and multimodal nature of emotion processing in infancy, including infants' response to vocal emotions, they do not directly address speech and its relation to emotion perception in infancy. Studies focused on infant-directed speech (IDS) and social referencing directly examine the nature of the relationship between language and pre-verbal infants' emotion perception.

4.1 Infant-directed speech

IDS is speech that individuals typically use when speaking with infants and young children. It is characterized by shorter and simpler utterances, slower tempo, and higher and more variable pitch (Cooper and Aslin 1990; Fernald and Kuhl 1987). IDS has frequently been studied in relation to language acquisition and other cognitive functions in infants (see Saint-Georges et al. 2013). Given the extensive literature on IDS, we will be providing only a limited coverage of this topic. We will be discussing studies that primarily focus on the emotional aspect of IDS. For more extensive reviews on IDS, see Cristia (2013), Golinkoff et al. (2015), Soderstrom (2007), and Spinelli, Fasolo, and Mesman (2017).

In a meta-analysis, Saint-Georges et al. (2013) concluded that IDS has four main functions: (i) engaging and maintaining infants' attention, (ii) facilitating social interaction through infants' preferences, (iii) communicating affect, and (iv) facilitating language acquisition. Even newborn and 1-month-old infants show a preference for IDS over adult-directed

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speech (ADS [Cooper and Aslin 1990]). IDS may be effective at attracting infants' attention because it is typically positive in affect. In fact, some have even argued that the preference for IDS is really just a preference for "happy speech" (Singh, Morgan, and Best 2002; Singh, Morgan, and White 2004). Trainor, Austin, and Desjardins (2000) examined whether the prosodic characteristics of IDS, such as exaggerated pitch and slower tempo, are due to the emotion being expressed. They found few differences between infants' responses to IDS and ADS when they were equated for emotion. Similarly, Singh, Morgan, and Best (2002) found no preference for IDS over ADS when the emotional content was equated. In fact, infants preferred ADS when the vocal emotion was more positive than the IDS.

Panneton et al. (2006) tested 18- and 32-week-old infants on speech varying in affective intensity (low vs. high) and tempo (normal vs. slow), which are characteristics of vocal emotion. The younger infants attended longer to slower IDS, but the older infants preferred normal IDS. In a second experiment, 18-week-olds preferred speech that was both slow and high in affect over speech that was slow and low in affect. In contrast, 32-week-olds had no preference when duration was held constant. Finally, 32-week-olds preferred IDS that was high in affect and normal in tempo over speech that was low in affect and slow in duration. The authors concluded that the positive emotion in IDS heightened attention in the younger infants; additionally, slow speech occurs naturally within IDS and subsequently facilitates young infants' ability to perceive vocal emotions. Therefore, the prosodic characteristics that influence infants' attention change across the first year of life.

The positive emotion typically present in IDS may be partially responsible for the benefits of IDS outlined by Saint-Georges et al. (2013), such as engaging attention and facilitating both language acquisition and social interactions. Moreover, the importance of IDS (and specifically its emotional nature) on language learning can be seen in instances in which the quality of caregivers' IDS is compromised. Evidence from a series of studies conducted by Kaplan and colleagues (Kaplan et al. 2001; Kaplan et al. 2015) has shown that the benefits associated with IDS are negatively impacted by maternal depression. Compared to non-depressed mothers, depressed mothers' speech is more repetitive, exhibits more "creak", and also contains more falling pitch contours (Murray, Marwick, and Arteche 2010). Kaplan et al. (2001) also found that there was less modulation in the fundamental frequency (F0) contour for depressed mothers' speech. Together these characteristics lead depressed mothers' speech to sound monotonous and flat, which often comes across as sounding sad, sorrowful, and/or neutral (Scherer 2003). Furthermore, 4- to 14-month-olds' associative learning to their own mother's IDS was negatively impacted by maternal depression (Kaplan et al. 2015). Together, these studies demonstrate the important role that the emotional content of IDS has on infants' learning, with the positive benefits being diminished when the emotional valence becomes less positive.

Another study illustrating the changing influence of the affective content in IDS tracked the developmental changes in preferences for speech varying in emotional intent (comforting, approving, and directive) from 3 to 9 months (Kitamura and Lam 2009). In this study, approving speech had the highest level of positive vocal affect of the three categories, whereas the positive affect in comforting and directive speech was not different. Likewise, the mean fundamental frequency (F0) was higher and the pitch range wider for the approving speech compared to the other two categories. In contrast, comforting speech

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was longer in duration than approving or directive speech. As expected, infants transitioned from a preference for comforting speech at the youngest age (3 months) to approving speech at 6 months.

Interestingly, 9-month-olds did not vary their attention across the three speech types in the study by Kitamura and Lam (2009), which contrasts with the previous findings by Panneton et al. (2006). The authors suggest that this may be a result of older infants' increasing attention to linguistic information, such as phonemes, rather than affect. When that information was filtered from the different speech types in a second experiment, 9-month-olds significantly preferred directive over comforting speech, but there was no difference between directive and approving speech. This suggests a transitional period between preference for the highly positive approving speech and directive speech. The authors note that these transitions across the three age groups match up with the types of speech typically used by mothers at those ages.

Thus, the literature clearly shows that infants benefit from hearing IDS, and it appears that one important component of IDS is its emotional nature (Singh, Morgan, and Best 2002). Supporting this idea, infants were found to prefer positive speech over negative or neutral speech, even if it is adult-directed (Singh, Morgan, and Best 2002), as noted earlier. Therefore, the emotion inherent in IDS may be driving the attentional and language-related benefits of this type of speech, suggesting that emotion influences language development. Thus, rather than language/conceptual development driving emotion knowledge (Barrett, Lindquist, and Gendron 2007), the relationship between emotion and language development appears to be bidirectional.

4.2 Social referencing

Everyday parent-infant interactions involve information from multiple modalities and provide a rich vehicle for language learning, as discussed in the prior section on IDS. One other way this may happen is through social referencing. Social referencing occurs when individuals look to others for cues, such as emotions, and use them to guide their behavior in an ambiguous or novel situation (Sorce et al. 1985). Infants who find themselves in novel situations, such as exploring a room with unusual toys, may look to their parents for cues on how to behave. If a caregiver expresses happiness or encourages the infant to explore the new toy, that may lead to additional opportunities for learning. Not only will the infant interact with the toy and learn about its physical properties, but parents may use that opportunity to provide verbal information about the toy, such as a label. In contrast, if infants are discouraged from interacting with a novel object in their environment, that may reduce their opportunities to gain additional information about that object. Therefore, emotions, and infants' responses to them, play a key role in facilitating or inhibiting infants' opportunities for word-object learning.

One popular method to test for evidence of social referencing is to use a visual cliff paradigm (Sorce et al. 1985), in which a table is covered with a transparent plexiglass material and is modified to appear to have a "shallow" end and a "deep" end. Infants are typically placed on the shallow end and are either encouraged or discouraged to cross the

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deep end of the cliff. This paradigm has been used to determine whether infants respond appropriately to emotional cues (e.g., not crossing when the caregiver expresses fear or anger [Sorce et al. 1985]) and which modalities (e.g., face, voice) most effectively guide infants' behavior (Vaish and Striano 2004).

In one of the first studies using this paradigm, Sorce et al. (1985) found that 12-month-olds were less likely to cross the deep end of the cliff if the mother's face expressed fear or anger than if she expressed joy or interest. This clearly demonstrates that, by the end of the first year, infants use emotional cues from faces to guide their behavior in an ambiguous situation. Vaish and Striano (2004) also assessed 12-month-olds' social referencing skills in a visual cliff paradigm, but instead of relying solely on positive facial cues, infants could also receive vocal-only or audiovisual (face + voice) positive cues. Infants crossed the cliff faster in the voice-only and face + voice condition compared to the face-only condition, indicating disparities in the influence of different modalities on infants' behavior.

Social referencing studies also are used for ambiguous situations involving novel objects. Mumme and Fernald (2003) found that 12-month-olds, but not 10-month-olds, exhibit differential responding to objects that had been referenced with either positive or negative affect in video recordings. Specifically, 12-month-olds avoided the target object in the negative affect condition, but not in the positive affect condition. However, as noted above, Vaillant-Molina and Bahrick (2012) found that 5.5-month-olds interacted with toys paired with bimodal positive expressions, but not when the expressions were unimodal. This is an especially important finding because previous studies have found evidence of social referencing only towards the end of the first year (Mumme and Fernald 2003).

Overall, these studies demonstrate that infants are sensitive to the speech and non-speech emotional cues depicted by others and that they use these cues to inform their behavior. This suggests that infants are sensitive to the social relevance of emotions despite not having verbal labels for those emotions.

5 Summary and future directions

Over the course of this chapter, we have documented the developmental trajectory of infants' emotion perception skills across multiple modalities according to Walker-Andrews' (1997) model, beginning with emotion detection and progressing to emotion recognition. Even newborns have been shown to discriminate among certain emotions (Cheng et al. 2012; Farroni et al. 2007), and pre-verbal infants discriminate among (Soken and Pick 1992, 1999; see Walker-Andrews 1997), categorize (Soderstrom et al. 2017; see Quinn et al. 2011), intermodally match emotional faces, bodies, and voices (Heck et al. 2018; Walker 1982; Zieber et al. 2014a, 2014b), and recognize the signal value of some emotions (e.g., in a social referencing context [Mumme and Fernald 2003; Sorce et al. 1985]). Infants are sensitive to emotion in speech, not only in terms of discriminating among vocal emotions (Grossmann et al. 2010), but also in their preference for positive-sounding speech (Singh, Morgan, and Best 2002), such as IDS (Cooper and Aslin 1990). Based on this evidence, we would argue that infants exhibit relatively sophisticated emotion perception skills by the end of

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the first year. How can these empirical findings address the theoretical debates surrounding emotion representation?

As noted earlier, the primary debate surrounding the development of emotion representation concerns the question of whether emotion perception is instinctual or innate, resulting from evolutionary adaptation (Ekman and Cordaro 2011; Izard 1994) or whether emotions are constructed from experience and conceptual development (Barrett 2006a, 2006b; Brosch, Pourtois, and Sander 2010; Russell 1980). The modular approach envisions emotions as discrete, universally shared basic categories available early in life (Ekman and Cordaro 2011). In contrast, dimensional models (Russell 1980) assume that emotion representation is broad in the beginning, limited to positive versus negative valence and low versus high arousal assessments, and only differentiates with experience and conceptual development. Furthermore, while the modular approach argues that emotion representation is independent of language (Ekman and Cordaro 2011; Izard 1994; Sauter 2018), Barrett's constructivist model posits that language is a key component in one's conceptual understanding of emotion (Barrett, Lindquist, and Gendron 2007; Lindquist, Satpute, and Gendron 2015; also see Widen and Russell 2008).

Specifically, Russell (1980; also see Widen 2013; Widen and Russell 2008) argues that only with extensive experience do individuals differentiate emotions within a valence. According to Widen and Russell (2008), this process of narrowing emotion categories occurs during the preschool years and is related to the acquisition of emotion scripts (e.g., components including the causes and consequences of emotions, facial and vocal expressions, labels, etc. [Widen 2013]). However, young infants have been shown to discriminate among (e.g., Schwartz, Izard, and Ansul 1985), intermodally match (e.g., Soken and Pick 1999), and categorically perceive (Ruba et al. 2017; Soderstrom et al. 2017; White et al. 2019) within-valence emotion expressions. In particular, the findings by Ruba et al. (2017) that 10-month-olds categorize anger/disgust contrasts indicates that young infants are sensitive to the perceptual distinctions between emotion categories that are similar in both valence and arousal. These findings indicate that emotion categories are differentiated much earlier than proposed by Widen and Russell (2008) and others (Russell 1980). Based on the findings presented here, it is clear that even very young infants have some knowledge of emotions before the advent of language, which contrasts with the theories put forth by Widen and Russell (2008) and Barrett, Lindquist, and Gendron (2007), who suggest that language is necessary for emotion knowledge.

Does this mean that emotion representation is somehow inborn? Not necessarily, because as we have discussed, many aspects of emotion processing are not seen at birth or soon thereafter, although they may be available later during the first year of life. For instance, Heck et al. (2018) found that 3.5-month-olds are not sensitive to emotions expressed by bodies, although 5-month-olds are. Moreover, as noted by Barret et al. (2007), infants may be responding to more basic perceptual, rather than conceptual, characteristics that distinguish emotion expressions (e.g., Caron, Caron, and Myers 1985). However, functions such as intermodal perception and social referencing that are seen within the first year of life are unlikely to be based solely on low-level physical features of emotional stimuli. The totality of evidence thus supports more rapid development of emotion representation than envisioned by dimensional/constructivist models such as those of Russell (1980), Widen

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and Russell (2008), and Barrett (2006a, 2006b), respectively. However, there is no evidence to suggest that newborns or young infants are sensitive to all emotion categories, and there is evidence of developmental changes and the role of experience in emotion processing during the first year of life, all of which argues against a strict modular view of emotion representation. Therefore, as suggested by Walker-Andrews (1997), it is likely that a strong propensity to attend to emotions early in life combined with learning from social encounters leads to fairly rapid development of emotion representation during the first year of life. This is not to argue that emotion knowledge is completely mature early in life, but that it develops much faster than envisioned by some theorists.

One caveat is that published research addressing infants' processing of within-valence emotion contrasts is still relatively limited (Ruba et al. 2017; Soderstrom et al. 2017; White et al. 2019). Thus, more research is needed to determine whether infants consistently respond to discrete emotions or mostly to broad classes of positive and negative emotions. However, the research presented seems to indicate not only that discrete emotion categories may be available within the first year of life, but also that these categories develop as a result of experience and/or maturation.

It is also important to note the differences in methodology across the field of emotion research, especially as it pertains to the study of developmental changes from infancy to childhood. Clearly, researchers studying infants' emotion processing are limited to tasks that do not require verbal abilities, whereas much of the research on children and adults use labeling tasks of one sort or another (e.g., fixed response or free labeling; categorization based on vignettes [see Nelson and Russell 2013; Scherer, Clark-Polner, and Mortillaro 2011; Widen 2013, for reviews]). Consequently, the level of processing and understanding of emotions addressed in infancy research is possibly much different from the level of emotion understanding tested on children and adults. To be able to fully describe adults' emotion representation, it is important to track the developmental trajectory of emotion processing beginning in infancy, through childhood, and into adulthood using common procedures that are amenable to addressing similar levels of emotion knowledge at different ages.

It is also important to understand the mechanisms that drive the development of emotion knowledge within the first year of life. For example, the onset of self-locomotion, and the resulting changes in infants' interactions with their environment, has been said to be a possible catalyst for shifts in emotional awareness (Campos, Bertenthal, and Kermoian 1992). Infants may become sensitive to the emotional content of events by experiencing redundant emotion information across multiple sources (e.g., mother's fearful face and voice) and then connecting that information with a co-occurring event (e.g., feeling pain after falling). Also, to obtain an accurate picture of what infants respond to when processing emotion expressions in natural interactions, it is important that future research include more realistic emotion stimuli (e.g., faces and bodies embedded in natural scenes; ambiguous expressions).

In conclusion, this chapter has sought to inform the debate regarding the interaction of emotion and language. In contrast to the view that language is necessary for emotion representation (Barrett, Lindquist, and Gendron 2007; Lindquist, Satpute, and Gendron 2015), we have reviewed studies that have found that preverbal infants exhibit fairly so-

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phisticated processing of emotions, suggesting that expressive language is not necessary to form emotion categories (also see Sauter 2018). However, it is important to note that even young infants may be exposed to verbal labels for different emotional events provided by their caregivers, so the role that receptive language plays in young infants' emotion perception may be important. Moreover, emotions influence language development through two naturally occurring interactions with caregivers. First, infants are exposed to positive emotion via IDS, which has been shown to be especially beneficial for language-related tasks (Ma et al. 2011; Saint-Georges et al. 2013). Second, infants look for emotion cues about how to behave in ambiguous or potentially threatening situations (i.e., social referencing [Mumme and Fernald 2003; Sorce et al. 1985; Vaish and Striano 2004]), such as when encountering a novel object. These natural parent-infant interactions are rich in terms of the opportunities they provide infants for learning about the world around them. Therefore, through emotional interactions with others, infants learn about the world around them, including how to successfully communicate and engage in appropriate behaviors in various situations.

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Marc Aguert

43 Interplay of language and emotion in development

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2 Language and theory of mind
3 Children's understanding of emotions (of silent people)
4 Talking about emotions improves emotional skills
5 Children's understanding of emotions (of speaking people)
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Abstract: From the crying baby to the adult politely asking for a glass of milk, the massive development of both linguistic and emotional skills during childhood continues to fascinate. Research over the past two decades has yielded growing evidence that these two sets of skills develop in tandem. Emotional understanding undergoes a threefold influence of language: first, because children with better language skills exhibit better emotional understanding; second, because linguistic input, especially parental mental-state talk, fosters emotional understanding; and third, because children lend far more importance than adults to speakers' utterances when judging their emotional state – a phenomenon known as *lexical bias*. Research has also shown that language enhances emotion regulation in children, both directly and through emotional understanding skills. Evidence that emotion impacts language acquisition and use in children is less frequent, which is surprising given the mostly emotional nature of primary caretaker–child interactions.

1 Introduction

Humans are a social species and becoming able to live in society through *social understanding* is a major goal of child development. Over the past three decades, the study of social cognition, the way that children process information from the social world, has gradually become dominant in the field of developmental psychology. Different skills (linguistic, emotional, social, etc.) were initially studied separately, but there is growing evidence that they work together as a system. All are tied to a cognitive construct known as *theory of mind*– a term coined by Premack and Woodruff (1978). Possessing a theory of mind means being able to think about others' behaviour in terms of mental states. Across development, children gradually come to understand that people's actions, utterances and emotions are determined by their beliefs. In this chapter, I review the links between emotion and lan-

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guage in child development. After describing the well-documented links between language and theory of mind, I focus on emotion, one particular type of mental state. I then discuss the way in which children understand the emotional states of silent and speaking people, paying particular attention both to the role of linguistic input and to verbal abilities. Lastly, I review the influence of language on emotion regulation.

2 Language and theory of mind

Possessing a theory of mind means thinking about others' behaviour in terms of mental states (e.g., Paul came to me because he *likes* me / he *wants* to talk to me / he *knows* that I want to talk to him). Mental states help to account for the huge difference between living beings and nonliving things. For instance, a ball is unlikely to roll towards me because it *knows* that I want to talk to it! Others' behaviour is explained and predicted by forming theories about their mental states (desires, goals, intentions, values, knowledge, beliefs, attitudes, emotions, etc.). Theory of mind development is a long process that starts in the first year of life (Tomasello 2009; Scott and Baillargeon 2017) and continues until adolescence (Dumontheil, Apperly, and Blakemore 2010). This development is marked by the acquisition of important milestones such as the attribution of false beliefs. False-belief attribution tasks allow children to show that they are able to attribute to someone a belief that, crucially, is not their own (e.g., Paul knows that the Smarties tube is full of pencils, but he is able to understand that his friend Bart, who has just entered the room, believes that the tube is full of Smarties). Studies show that children can successfully perform classic false-belief tasks such as the Smarties tube test from around 4–5 years old (Gopnik and Astington 1988; Wimmer and Perner 1983).

At this stage, it is worth noting that these classic theory of mind tasks rely heavily on linguistic skills. They are basically verbal tasks, as the children have to respond verbally to a verbal question. Apart from the unexpected-identity task (e.g., Smarties tube test), the other most common task used to assess false-belief attributions in children is the change-of-location task: a narrative is presented to the child in which an object is moved from one location to another while a protagonist of the story is off stage. For instance, Maxi's chocolate is moved from the red cupboard to the blue cupboard while Maxi is away. Children are asked "When Maxi comes back, where will he look for the chocolate?" This kind of task relies on advanced syntactic abilities, as theory of mind tasks involve embedded statements such as "Bart believes that the Smarties tube is full of Smarties", "Paul thinks that Bart wrongly believes that the Smarties tube is full of Smarties" and "I know that Paul thinks that Bart wrongly believes that the Smarties tube is full of Smarties" and so on, in a recursive manner. Children's lexical knowledge is also recruited, as they must be able to understand mentalistic verbs such as *think*, *believe* and *feel*, which are notoriously hard to acquire (Papafragou, Cassidy, and Gleitman 2007). More generally, these classic theory of mind tasks are essentially designed with verbal material (Achim et al. 2013), even if they are often supplemented with pictures or even real objects (e.g., a tube of Smarties), so semantic knowledge is required to understand the narratives. Because of the verbal packaging of most of the theory of mind tasks, it is not surprising that researchers have found

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significant correlations between theory of mind performances and language measures. When Milligan, Astington, and Dack (2007) conducted a meta-analysis of 104 studies investigating the relationship between language ability and false-belief understanding, they found that the association between these two domains had a moderate-to-large effect size overall. *Overall* means that this effect size was roughly the same for all types of false-belief tasks, even though these tasks make varying linguistic demands.

There is an undeniable association between language and false-belief understanding, but does this association merely reflect the fact that theory of mind tasks are essentially verbal tasks? Many researchers argue that language actually plays a causal role in the development of mental understanding. Taking their analysis of longitudinal studies further, Milligan et al. (2007) showed that the relationship between language and false-belief understanding is bidirectional: "earlier performance on measures of language ability predicts later false-belief task performance, as well as the reverse" (Milligan et al. 2007: 638). However, results also revealed that the direction of the effect was significantly stronger from language ability to false-belief understanding. According to Harris, de Rosnay, and Pons (2005), there are four lines of research supporting the stance that language impacts the development of theory of mind. First, two longitudinal studies found that very early language abilities predict the theory of mind test performances of 3-year-old children tested 3 times over a period of 7 months (Astington and Baird 2005; Astington and Jenkins 1999). Second, native deaf children are delayed in their acquisition of theory of mind, especially deaf late signers with hearing parents. This delay, which persists when tasks are designed to be nonverbal, has been attributed to limited linguistic input in childhood (Jones, Gutierrez, and Ludlow 2015; O'Reilly, Peterson, and Wellman 2014; Peterson, Wellman, and Slaughter 2012). Similar results have been highlighted for children with specific language impairment (Andrés-Roqueta et al. 2013; Stanzione and Schick 2014). Third, there is now a large body of literature showing a strong association between parental mental-state talk and children's false-belief understanding, prompting some to conclude that mother-child interactions are the *cradle* of theory of mind (Licata, Kristen, and Sodian 2016). Ruffman, Slade, and Crowe (2002) found that the more mothers used mental-state utterances when describing pictures to their 3-year-old children, the better their children performed on a later theory of mind assessment. This effect persisted even after controlling for various potential mediators, such as the children's initial theory of mind understanding and language ability. Many studies were subsequently published on this topic, allowing Devine and Hughes (2018) to conduct a meta-analysis of 28 separate studies involving almost two thousand 3- to 5-year-old children. This confirmed a small but significant correlation between children's false-belief understanding and parental mental-state talk (see also Devine and Hughes [2017] on the importance of parental mental-state talk). Fourth, evidence of the causal role of language in theory of mind improvements has come from training studies, where two groups of children – one of which has been trained with verbal tasks – are tested on theory of mind skills. These verbal tasks can be conversations focusing on the mental states of characters in stories, the reading of stories enriched with a mental lexicon, feedback and explanations given to children as to why their answers to theory of mind questions are right or wrong, and so on. These language-based interventions have proved their efficacy in improving theory of mind skills in both preschoolers and school-aged children (Bianco, Lecce, and Banerjee 2016; Hale and Tager-Flusberg 2003; Lohmann and Tomasello 2003; Ornaghi, Brockmeier, and Gavazzi 2011).

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This brief overview makes it clear that language is a crucial ingredient in theory of mind development, in terms of both structural (semantics and syntax) and pragmatic (conversations with peers and family members) abilities. Nevertheless, almost all this literature is based on the study of false-belief understanding, raising the question of whether language is equally important when it comes to emotional understanding.

3 Children's understanding of emotions (of silent people)

Emotions are a class of mental states that attracted the attention of researchers well before they started to show an interest in theory of mind in the 1980s. Darwin's (1872) influential work emphasized the biological roots of emotional phenomena, the central role of facial expressions as a signalling system, and the continuity between humans and other primates with respect to both the function and communication of emotions. According to the discrete-category account of emotions (Ekman 1992; Izard 1994) that extended the Darwinian view to contemporary psychology, facial expressions of at least six basic emotions (happiness, sadness, anger, fear, surprise and disgust) are innate and universal, and emotion recognition is often reduced to the recognition of these facial expressions, making it a language-free issue. However, the fact that, unlike other primates, humans speak, express their emotions verbally, and talk about their emotions together cannot be ignored. Rather, "it is more likely that it produces a psychological revolution. After all, it allows human beings to communicate what they feel not just about ongoing situations, but also about past, future, recurrent, or hypothetical situations. These conversations – which begin in early childhood – provide our species with a unique opportunity to share, understand, and reconstitute emotional experience" (Harris 2008: 321).

A current account of emotional understanding suggests that adults are able to understand and distinguish between the different emotions because they have a specific, sophisticated script about each emotion (Widen and Russell 2008b, 2010, 2011). It should be noted that we are dealing here with full emotional understanding, and not simply the discrimination, recognition or labelling of facial expressions of emotions (Székely et al. 2011). Pons, Harris, and de Rosnay (2004) identified nine different components of children's emotional understanding – not just the recognition of facial expressions, but also the understanding of situational causes, understanding of the links between mental states (desires, beliefs) and emotions, and the realization that emotions can be mixed, regulated, faked, and so on. A *script* can be defined as a narrative structure that includes all the relevant characteristics of a given emotion, including causes (eliciting events), conscious feelings, physiological and behavioural manifestations (facial expressions, vocalizations, actions), verbal labels, and consequences. According to this account, the development of emotional understanding in children consists of the enrichment of these emotional scripts. At 2 years, children are thought to have only two very broad scripts, based on the valence (positive or negative) of emotional experience. People are thus either happy (feeling good) or unhappy (feeling bad). This broad distinction is efficient enough for children to adapt their behav-

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iour according to the emotional signals provided by adults – a process known as *social referencing* (Feinman 1982). Then, at around 3 or 4 years, the script of negative emotions is restructured along an arousal dimension, allowing sad people (low arousal) to be distinguished from angry people (high arousal). This takes place concurrently with emotional lexicon development (Ridgeway, Waters, and Kuczaj 1985; Wellman et al. 1995). Thus, in the course of development, emotional categories become more numerous and their use narrows (see Widen and Russell [2003, 2008a, 2008b] for more details of this account) and, according to Nook et al. (2017), this qualitative move from dichotomous emotional representations based on valence to multidimensional representations is primarily fostered by verbal development. These authors conducted mediation analyses that revealed that the increased focus on arousal dimension from 6-year-old to 25-year-old is explained by the increased performance on a verbal knowledge task (namely, the vocabulary score of the Wechsler Abbreviated Scale of Intelligence, second edition). Going further, the proponents of the theory of constructed emotions suggested that emotional words are the bootstrap and the "glue" that would allow the construction of emotional concepts in children's mind (Barrett 2017; Lindquist, Satpute, and Gendron 2015).

Crucially, emotional scripts also include an appraisal stage, as people not only have different expectations, but also appraise situations in different ways, and therefore do not all feel the same emotions as a result. A good understanding of others' emotions requires a good appraisal of the situation – not as we understand it, but as others understand it. Seeing one's father may be a good or a bad thing, eliciting either happiness or anger, depending on the appraisal each person makes of this event. Thus, mental states like emotions depend on other mental states like desires or beliefs. A child is most probably happy because he or she *wanted* milk and now has milk. Or is happy just because he or she likes milk and *believes* that he or she will have milk. More generally, it has been shown that success in tasks of false beliefs predicts emotional competence in preschool children (Seidenfeld et al. 2014). From a developmental standpoint, children begin to attribute emotions to people according to their goals and desires at around 2 or 3 years. Later, at around 5 or 6 years, children also consider beliefs and expectations in their emotion attributions (Harris 2000, 2008; Pons et al. 2004). Bradmetz and Schneider (1999) highlighted this progression with the following example: 4- and 5-year-old children understand that when Little Red Riding Hood enters her grandmother's cottage, she falsely believes that it is her grandmother in the bed. Interestingly, however, when they are asked to attribute an emotion to Little Red Riding Hood, they still answer that she is afraid (presumably of the wolf's presence). Not until the age of 5 or 6 years do children attribute happiness to Little Red Riding Hood on seeing her grandmother. Similar results were found by Harris and colleagues with the nasty-surprise paradigm, which involves a protagonist mistakenly expecting a positive outcome that turns out to be negative (de Rosnay and Harris 2002). Thus, emotional understanding, sometimes referred to as the *hot part* of theory of mind, also involves the *cold part* of theory of mind, namely, belief, knowledge and intention attribution. Appraisal processes are particularly involved in the understanding of complex and social emotions like guilt (Harris 2008) or mixed emotions (Larsen, To, and Fireman 2007). Imagine a man who has found his lost dog. He is happy, but his feelings are mixed when he discovers that the dog is injured. These mixed feelings cannot be properly understood on the basis of facial

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expression(s) alone, as they require a sharp appraisal of the whole event, including the protagonists' beliefs. The development of emotional understanding therefore consists of the gradual enrichment of emotional scripts. There is now convincing evidence that language and linguistic skills play a key role in this enrichment, as we see below.

4 Talking about emotions improves emotional skills

When they investigated the nine components of emotional understanding (see above) with the Test of Emotion Comprehension, Pons and his colleagues were struck by the breadth of individual differences in children's skills (Pons and Harris 2005; Pons et al. 2004). On some components, the highest-scoring children in the younger group scored higher than the lowest-scoring children in the older group! Given the noteworthy role of language in theory of mind development, these researchers investigated the association between language abilities and emotional understanding in an attempt to explain these differences (Pons et al. 2003). Language and emotional understanding were assessed with the Test of Receptive Grammar and the Test of Emotion Comprehension in 80 children aged 4–11 years. After controlling for the effect of age, language explained 27 % of emotional understanding variance (i.e., a strong effect). This link had earlier been highlighted with a semantic measure (British Picture Vocabulary Scale; Cutting and Dunn 1999) and has been confirmed several times since then (de Rosnay et al. 2004; Fine, Izard, and Trentacosta 2006; Pons et al. 2003; Ruffman et al. 2002), most recently with large cohorts of children (Karstad et al. 2015). Rosenqvist et al. (2014), for instance, found that language abilities predicted a simple task of facial expression recognition in 370 children aged 3–6 years. In children aged 7–9 years, Beck et al. (2012) showed that the relationship between language competence and emotional competence was so strong that it could be explained by a single latent factor, probably linked to conceptual abilities.

Although the association between language and emotional understanding has been well established, researchers have struggled to ascertain which particular aspect of linguistic ability emotional understanding initially relies on: semantics or syntax (Ruffman et al. 2003). Just as with false beliefs, emotional understanding seems to be related to a general language ability rather than to syntax or semantics per se (Milligan et al. 2007). And just as with false beliefs, this general language ability probably mainly reflects the fact that some children talk more than others about emotions with their peers, siblings, and in particular their parents (i.e., expressions, labels, causes, etc.). Because children learn emotion scripts through social interactions (e.g., family discussions, conflict resolution, collective reminiscing, reading of storybooks; Saarni 1999), the key linguistic skill is presumably pragmatics (Harris et al. 2005). Indeed, there is growing evidence that social scaffolding and parental mental-state talk play a decisive role in emotional understanding.

Dunn and colleagues were the first to study this issue, back in the early 1990s. They began by confirming that the amount of emotional talk varies greatly from one family to another. Dunn, Brown, and Beardsall (1991) showed that during an hourlong home visit, there were on average 8.4 conversational turns involving talk about feelings between mothers and their 3-year-old children, but frequencies ranged from 2.1 to 25.0. After an interval

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of 3 years, they assessed the same children's ability to recognize emotions, by administering the Rothenberg Test. The more children had been exposed to mothers' mental-state talk at age 3, the better they were at recognizing emotions at age 6. This correlation was replicated in other studies (Brown and Dunn 1996; Dunn et al. 1991), suggesting that some parents are more elaborative than others when broaching emotional topics, and this elaboration enhances emotional understanding in children. Of course, these correlational data are open to alternative interpretations, which is why more studies were conducted. I have already mentioned the work by Ruffman et al. (2002). In addition to assessing false beliefs, these authors assessed emotional understanding through a desire-emotion task and an emotion-situation task, and language ability through the Clinical Evaluation of Fundamentals – Preschool Test. They made these measures on three occasions when the children were aged between 3 and 4 years. Early maternal mental-state talk predicted children's subsequent theory of mind performance (including emotional understanding), even after controlling for their language abilities. As the children's theory of mind performance at an earlier point did not predict later maternal mental-state talk, the authors confidently claimed that their results pointed to a causal role for mothers' mental-state talk. They also analysed mothers' nonmental-state talk (i.e., factual, assertive comments), which proved to have no impact on children's emotional understanding. The role of parental mental-state talk has been supported in subsequent studies, with younger children (Taumoepeau and Ruffman 2006) and with different measures of parental mental-state talk. For instance, de Rosnay et al. (2004) measured mothers' use of mental-state talk when talking *about* their children rather than talking *with* their children, that is, independently of the child's mode of conversation. Warren and Stifter (2008) found that supportive maternal mental-state talk had a positive impact on preschoolers' emotional self-awareness – at least for positive emotions. Drummond et al. (2014) found that emotion and mental state talk were associated with empathic prosocial behaviour in toddlers.

The best evidence for a causal relationship between linguistic scaffolding and improvements in emotional understanding comes from training studies. Training programs designed to foster the socio-emotional skills of children, especially those who come from a disadvantaged background or have emergent mental health problems, have been around for several decades (Izard et al. 2004; Pons, Harris, and Doudin 2002), but recent research shows that plain conversations about emotions yield similarly positive effects. The Italian research group led by Grazzani and Ornaghi recently published a set of studies that consistently showed the positive impact of conversational training on emotional understanding at almost all stages of child development: school age (Ornaghi, Brockmeier, and Grazzani 2014), preschool age (Grazzani and Ornagh, 2011; Ornaghi et al. 2015) and even toddlerhood (Grazzani et al. 2016). For instance, in the case of preschoolers (4- and 5-year-old children), participants in the experimental group were given 12 sessions, each about 1 hour long, to discuss the nature of four basic emotions (happiness, anger, fear and sadness), their causes, and the means of regulating these emotions (Ornaghi et al. 2015). The experimenter read out a short illustrated scenario presenting a prototypical everyday situation with emotional connotations (e.g., receiving a desired gift). The children were then "prompted to contribute to [a] structured conversation by recounting and sharing their own experiences and thoughts in relation to the target emotion" (Ornaghi et al. 2015: 172). The children's emo-

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tional understanding was assessed with the Test of Emotion Comprehension (Pons et al. 2004) before the intervention, after the intervention, and four months after the posttest. Results showed that the intervention improved participants' emotional understanding, and this positive effect remained stable over time. The intervention also improved children's prosocial orientation but not their theory of mind (contrary to the study hypothesis and to the results of Ornaghi et al. [2014]). Another study interestingly showed that explanations bring an equivalent benefit whether they are generated by the child or provided by an adult (Tenenbaum et al. 2008).

In sum, there is evidence that talking about emotions improves emotional skills based both on ecological analyses of parental mental-state talk at home and on more experimental data yielded by training programs. The exact nature of the mechanisms by which mental-state talk influences emotional understanding, and more generally theory of mind and social understanding, is still subject to speculation, although most researchers underline the benefits of metacognitive processing. Such speculations are beyond the scope of this chapter but interested readers can refer to Carpendale and Lewis (2015). Instead, we will now tackle a surprisingly under-investigated issue: understanding the speaker's emotional state.

5 Children's understanding of emotions (of speaking people)

Clearly, understanding others' emotions is not limited to a simple association between a facial expression and an underlying emotion, even if this account has dominated the field for a long time. Instead, adults and children build theories about others' emotional states using a wide range of cues from the situation, their knowledge, and the mental states (beliefs, desires, goals, etc.) they attribute to others which in turn are theoretical constructs based on a variety of cues (Achim et al. 2013). Emotions form a unique class of mental states, as these states are behaviourally expressed through facial expressions, prosody and posture. Although facial expressions can be regulated, faked or simply unavailable, such as during telephone conversations, it remains possible to attribute emotions, owing to the wide range of other cues. Determining the relative *strength* of these different cues in an experimental setting is a tempting but difficult exercise as the use participants make of each cue will depend to a great extent on the salience of the material and the competing cues. Facial expressions may be either static or dynamic, prototypical or not. Similarly, the context may be rich or poor, ecological or not, and displayed either verbally or with pictures. It is worth noting that facial expressions are not the strongest cue for all emotions and at all ages. More specifically, the saliency of facial expressions decreases noticeably with age and for more complex (or s*ocial*) emotions such as disgust, embarrassment and shame (Gil et al. 2014; Gnepp 1983; Gross and Ballif 1991; Hoffner and Badzinski 1989; Stifter and Fox 1987; Widen, Pochedly, and Russell 2015; Widen and Russell 2010). More interesting for the purposes of this chapter is the impact on emotional understanding of what people say, especially as developmental research has yielded consistent results regarding this cue.

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One obvious way in which language can influence emotional understanding that has not been mentioned up to now is the way that people verbally report their emotional states. Linguists and psycholinguists refer to this family of utterances as *affective* or *expressive speech*, or *emotive communication* (Caffi and Janney 1994). Scholars in the field of affective sciences have tended to ignore these more or less explicit verbal reports of emotional states. And yet, humans are social animals endowed with the power of speech, and if a person is feeling happy or sad, he or she will probably share it verbally with others. The emotion-laden content of speakers' utterances is known to impact emotional understanding in children. Evidence for this comes from a set of studies investigating whether it is verbal or nonverbal information that *speaks louder* in communication. In the 1970s, under the influence of Gregory Bateson and his colleagues at the Mental Research Institute, the idea that a contradiction between what is said verbally and what is communicated nonverbally can result in psychiatric disorders enjoyed considerable popularity. Imagine, for instance, a depressive mother who repeatedly says loving words to her child, but in a cold and distant manner (Watzlawick, Beavin, and Jackson 1967). Researchers demonstrated that in order to judge the emotional state of a speaker uttering expressive speech, adults consider all the available cues but rely primarily on nonverbal cues in the form of emotional prosody and/or facial expression (Baider and Cislaru 2014; Mehrabian 1972). Things are radically different with children, for unlike adults, children between the ages of 3–4 years and 9–10 years give precedence to what is being said by the speaker over all other cues, including facial expression and prosody, when judging his or her emotional state. This is known as the *lexical bias* (Friend and Bryant 2000). Eskritt and Lee (2003) conducted the following experiment with 3- to 5-year-old children: an actor in a video has a drink and then says either "I like it" with a negative facial expression (a frown) or "I don't like it" with a positive facial expression (a smile). Children are asked "Do you think she liked the drink or not?". Results showed that all the children massively relied on the lexical content to answer this question. When the authors tried to increase the saliency of the nonverbal channel with an *exaggerated condition* where the facial expressions were accentuated and displayed with sounds (*mmmm* and *blech*), a small majority of children gave precedence to the nonverbal channel, but only when it was negative. These results are surprising because, as we saw, even at 3 years, children are able to interpret positive, happy facial expressions. There is also evidence that 3- or 4-year-old children are able to grasp some basic reasons for inconsistencies between individuals' displayed and actual emotions (Banerjee 1997; Sidera, Amadó, and Serrat 2013).

The lexical bias has also been found when children are asked to judge the emotional state of a speaker and there is a discrepancy between the lexical channel and the vocal channel (i.e., emotional prosody). Friend (Friend 2000; Friend and Bryant 2000) showed convincingly that although children aged 4–10 years are able to correctly judge the emotional state of speakers based solely on their emotional prosody, they give clear precedence to the lexical content when the latter is emotionally discrepant from the emotional prosody. In these experiments, the speaker did not verbally express her explicit emotional state (e.g., "I'm really mad"), producing instead emotion-laden utterances selected from a corpora of mother-child interactions such as "You're doing a great job" (rated as conveying happiness) or "You're nothing more than a big baby" (rated as conveying anger) with congruent

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or discrepant prosody. The lexical bias was also highlighted in 4-year-olds using a social referencing procedure (Friend 2003). In this study, the lexical content was shown to override a combination of both facial and vocal cues. Morton and Trehub (2001) found the same lexical bias in children for happy and sad utterances. They were careful to ensure that the speaker's utterances did not include any emotion or emotionally charged words. The utterances were thus emotionally laden but factual (e.g., "My mommy gave me a treat" or "My dog ran away from home"). They showed that the majority of children aged 9 years or younger judged the speaker's emotion by what she said, whereas the adults did so by how she spoke. Some of the 10-year-olds still focused on the verbal channel, but others relied on the nonverbal channel. Interestingly, Morton and Trehub showed that at least by age 7 years, children noted the inconsistency between the two channels, although they still gave precedence to the lexical content. More surprising findings were to follow. For example, a lexical bias was highlighted in the context of judgments of emotions in songs (Morton and Trehub 2007). These authors found that 6-year-old children persisted in judging the speaker's feelings based on lexical content, even when they were explicitly instructed to use the vocal channel (Morton, Trehub, and Zelazo 2003; Waxer and Morton 2011). The children successfully completed a task involving discrepant lexical and prosodic dimensions of nonemotional speech (e.g., touching a downward pointing arrow when they heard the word *high* uttered with a low pitch), but failed on a similar task involving emotional speech (e.g., touching a drawing of a sad face when they heard the word *smile* uttered with a sad prosody) (Waxer and Morton 2011)!

In sum, the lexical bias is a well-established phenomenon that pervades the whole of childhood. Although it is still not well understood, it underlines the tremendous importance of speakers' verbal productions in children's attribution of emotions. As noted by almost all the researchers who have worked on this, the lack of interest in emotional prosody is really striking given the importance of this cue in language interactions during the first few years of life. We return to this issue in the conclusion of this chapter. Before we do so, however, we look at the role of language in the regulation of children's own emotions.

6 Language in children's regulation of emotions

Emotional understanding is not limited to understanding and predicting others' behaviour. By understanding our own emotions, we enhance our ability to regulate them. A simple definition of emotion regulation would be the ability to cope with an emotion that is potentially threatening or incompatible with social expectations. For instance, a scared child watching a horror movie may regulate her fear either by closing her eyes or by channel-hopping. Alternatively, she may talk to herself (e.g., "This is not real, just on TV") or seek social support from an adult who will offer comforting words. We have a strong intuition that talking about our emotions can help us to manage them, and it is this that forms the basis of emotion-focused therapy (Greenberg 2004). In children, Cole, Armstrong, and Pemberton (2010) have suggested that language fosters emotion regulation in at least three ways: (i) indirectly, by enhancing emotional understanding; (ii) directly, by providing a

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new and powerful means of expressing and achieving goals for wellbeing (children express their needs and frustration through words rather than through behaviour such as temper tantrums); and (iii) by providing an additional strategy for coping with frustration (i.e., self-addressed verbalizations that help them shift their focus away from the emotion). However, to date, these suggestions have seldom been empirically tested.

Garner and Power (1996) showed that the better the emotional understanding of preschoolers, the better their emotion regulation when given a *disappointing* prize. This result indicates that emotional understanding probably mediates the link between verbal abilities and emotion regulation. Verbal abilities and linguistic input are strong predictors of emotional understanding. In turn, "emotion understanding gives children a way to identify their internal feelings, which can then be made conscious. Such conscious emotional awareness allows children to immediately attach feelings to events, which can then facilitate successful and appropriate regulation" (Eisenberg, Sadovsky, and Spinrad 2005: 111). More direct evidence was provided by Roben, Cole, and Armstrong (2013). By administering a *boring waiting task* (children had to wait 8 minutes before opening a gift), these authors demonstrated that language skills in toddlerhood help children regulate their emotions when they reach preschool age: the toddlers with the best verbal abilities become the preschoolers with the least quick, intense and sustained anger.

The hypothesis that self-addressed verbalizations help to regulate behaviour has received empirical support from research on the role of language, including private speech, in children's self-regulation. Like theory of mind, self-regulation has both cognitive and affective components, and language is known to play a role in the cognitive components (Vallotton and Ayoub 2011). Ever since Vygotsky ([1934] 1986)'s ground-breaking research, we have known that private speech increases when children have to perform costly cognitive tasks. Day and Smith (2013) showed that private speech is also associated with emotion regulation in preschoolers. Children's use of private speech in a frustration task was found to be related to the emotions that were elicited (sadness and anger) and the regulation strategies that were used. A final argument for links between language and emotion regulation is the regular association between children's language delays and their behavioural problems, especially those involving poorly regulated anger (e.g., Irwin, Carter, and Briggs-Gowan 2002). In particular, children with specific language impairments have been found to have externalizing behavioural problems explained by a lack of emotion regulation (Fujiki, Brinton, and Clarke 2002; Fujiki et al. 2004).

7 Conclusion

So far, we have discussed the way that language and linguistic skills affect emotion comprehension. Readers may wonder about the influence of emotion on language acquisition. We have to admit that the *emotion revolution* that began in the cognitive sciences in the 1990s has not really reached developmental psycholinguistics yet (Caldwell-Harris 2008; Hohenberger 2010). More and more studies are showing that in adults emotional states influence the selection of word meanings and the efficiency of lexical access in an emotion-congruent way (Niedenthal, Krauth-Gruber, and Ric 2004; Pratt and Kelly 2008). The theo-

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retical framework of embodied cognition has yielded evidence that language is grounded not only in action and perceptual states, but in emotional states, too (Glenberg et al. 2005; Havas, Glenberg, and Rinck 2007). However, with a few exceptions focusing on the role of emotional prosody (Berman et al. 2013; Herold et al. 2011), there is scant literature on the role of emotions in language acquisition. This is surprising as most developmental psychologists, especially socioconstructivist ones (Bruner 1983), agree that language acquisition is rooted in caregiver-child interactions and that these early interactions are mainly *emotional* (Stern 1985). Most of the meaning shared between a mother and her child during the first year of life is conveyed by emotional prosody, leading Fernald to claim that for infants, the melody is the message (Fernald 1989, 1993). More recently, Singh, Morgan, and Best (2002) argued that 6-month-old infants have no special preference for baby talk but do for happy talk. We can thus assume that it is the positive affects commonly conveyed by motherese that are behind infants' well-established preference for this kind of talk (see also Corbeil, Trehub, and Peretz 2013). Given this sensitivity to emotional prosody in early childhood, how can we explain the fact that between 4 and 10 years, children exhibit a lexical bias, that is, a pronounced preference for attributing an emotion to a speaker on the basis of what is said rather than how it is said? Some results suggest that emotional and linguistic skills compete for cognitive resources in toddlerhood and the latter push the former into the background for a period of some years. When Friend (2001) investigated the lexical bias in 15-month-old infants via a behaviour regulation task, she showed that at the group level the infants' behaviour was better regulated by paralanguage (both facial and vocal channels) than by lexical content. More interestingly, she also showed that the greater the children's receptive vocabulary, the less precedence they gave to paralanguage. According to Friend, a transition takes place from affective to linguistic meaning in comprehension – a transition that also occurs in language expression (Bloom and Beckwith 1989; Bloom and Capatides 1987). Do these results mean that language acquisition, once this transition from an affective to a linguistic focus on speakers' utterances has taken place, is a completely *emotion-free* process? This is highly unlikely, and more research is needed to shed light on the various ways that emotions may constrain or foster children's acquisition and use of language. It is unlikely first of all because there is evidence that emotional states influence language processing in adults (see above) and this influence must arise in the course of development. Furthermore it is easy to formulate reasonable hypotheses about the way emotions might impact language. For instance, Fujiki et al. (2004) suggested that a child who cannot regulate his emotions may often be seen as a difficult conversational partner and thus may be isolated or rejected by peers and adults. These hypotheses are just waiting to be tested.

In the introduction to this chapter, I wrote that linguistic, emotional and social skills probably work together as a system. That is, any change to one of these sets of skills sooner or later has an impact on the two others, which in turn have an impact on the first one. I then chose to focus on the interaction between emotional and linguistic skills, primarily reviewing evidence that emotional understanding is affected by children's verbal ability and linguistic input. But to conclude, I want to mention social skills, the missing piece of this jigsaw. Socialization, social contacts and interactions with family and peers allow people, including children, to practise both their emotional and linguistic skills, and to receive

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feedback, which undoubtedly improves these skills. However, such social interactions are not possible, or at least remain very limited, until children have mastered basic linguistic and emotional skills. Social interactions foster language acquisition (Bruner 1983; Kuhl 2007; Longobardi et al. 2016), language abilities foster emotional understanding and emotion regulation (see *supra*), emotional understanding and emotion regulation foster sociability, prosocial behaviour and popularity (Denham et al. 2003; Denham et al. 1990; Ornaghi et al. 2015), and arriving full circle, social interactions foster language abilities. The intertwining of these three domains (Cassidy et al. 2003) sometimes makes researchers' efforts to highlight unique variance and simple cause-and-effect relationships look a little desperate. A more systemic approach to these different skills could probably bring a fresh perspective and new insights.

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44 Socializing children into understanding emotion

1 Introduction
2 Cultural considerations in the development of emotion understanding
3 Parent socialization of emotion understanding
4 Conclusions
5 References

Abstract: Emotion understanding, defined as the ability to identify, interpret, communicate, and reflect on one's own and others' emotions, is critical for healthy development. The capacity for understanding emotions is thought to be universal, emerging in infancy and developing over the lifespan. However, this universal capacity is embedded within the cultural context and comes under social influence as caregivers foster emotion understanding based on the values, beliefs, and standards of their community. The preschool years appear to be an important time for the socialization of emotion understanding, as preschool-age children are increasingly able to identify and label emotions in themselves and others, recognize facial expressions associated with specific emotions, understand the conditions that elicit different emotions, and appreciate how emotions influence behavior. In this chapter, we focus on the development of emotion understanding, the role of parents in fostering children's understanding of emotion, and how culture provides the lens through which the socialization of emotion understanding occurs.

1 Introduction

1.1 Conceptualization of emotion understanding

Emotion understanding is thought to encompass a variety of skill sets, including emotion recognition, emotion knowledge, and advanced emotion understanding. Emotion recognition consists of perceiving and labeling emotional expressions based on facial, vocal, and bodily cues. Emotion knowledge involves the ability to make attributions about one's own and others' emotions using general and culture-specific norms for emotional situations (Castro et al. 2016; Widen 2013). Advanced emotion understanding is an awareness of emotions embedded within interpersonal exchanges. Recent work suggests that advanced emotion understanding moves beyond general knowledge into an understanding of emotional processes within relationships, and how a specific person typically experiences emotions in a given situation (e.g., recognition of a parent's emotions during an argument) (Castro et al. 2016).

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Emotion understanding emerges during infancy and continues to develop throughout early childhood and beyond. The skills required to understand emotional processes are viewed as sequential, building on one another such that emotion recognition gives way to knowledge, which in turn contributes to advanced emotional understanding (Castro, Halberstadt, and Garrett-Peters 2016). At the most basic level, children develop the ability to identify emotions in oneself and others (Denham and Couchoud 1990) and begin to understand the causes and consequences of emotions (Denham et al. 2002), as well as the types of situations likely to elicit different emotions (Denham and Zoller 1991; Harris et al. 1987). Over time, more complex capacities evolve that enable children to recognize and understand mixed, social, and moral emotions (Muris and Meesters 2014; Zajdel et al. 2013), as well as how to interpret multiple and sometimes incongruent emotional messages (Gnepp 1983). Furthermore, as language and emotional domains become better integrated, children's proficiency in using emotion terms increases, and children become more skilled at articulating and reflecting on the emotional experiences of themselves and others (Cole, Armstrong, and Pemberton 2010; Thompson 2011). As children's emotion understanding continues to grow, they come to appreciate that emotional states change (Davis et al. 2010), that certain strategies may be more and less effective for modifying emotions (Dennis and Kelemen 2009; Waters and Thompson 2014), and that one's emotional expression may not match their internal experience (Cole 1986). Therefore, emotion understanding is inherently multifaceted and a hallmark of healthy development (see Trentacosta and Fine [2010] for a review).

1.2 Importance of emotion understanding for child development

The ability to understand emotions is associated with multiple indicators of social-emotional, behavioral, and academic competence. For example, child emotion understanding predicts emotion regulation ability (Cole et al. 2009), theory of mind (Nancarrow et al. 2018), empathy and prosocial behavior (e.g., Ensor, Spencer, and Hughes 2011; Heinze et al. 2015; Ornaghi et al. 2015), likability in preschool (e.g., Garner and Waajid 2012), and teacher-rated social skills (e.g., Ensor, Spencer, and Hughes 2011). Children who are more skilled at understanding emotions also exhibit better classroom adjustment (Denham et al. 2015) and academic performance (Blankson et al. 2017). In contrast, poor emotion understanding is associated with greater behavioral difficulties (Denham et al. 2002), as well as externalizing and internalizing problems (see Trentacosta and Fine [2010] for a review). This likely explains why intervention programs for young children (e.g., Promoting Alternative Thinking Strategies [PATHS] and the Emotion-Based Prevention Program) focus on understanding, labeling, and talking about the causes and consequences of feelings, as well as verbally exploring ways of handling frustrating situations and peer conflict. These programs increase prosocial behavior and reduce behavior problems in preschoolers through improved emotion understanding (Bierman et al. 2008; Conduct Problems Prevention Research Group 1999; Izard et al. 2008).

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1.3 Role of culture

Most definitions of culture embrace the idea of a dynamic system of shared beliefs, practices, and traditions passed from one generation to the next (e.g., Markus and Kitayama 2010; Raval and Walker 2019). By its nature, emotion socialization encompasses universal and culture-specific features. The capacity to experience, express, and understand emotions is thought to be universal and necessary for survival. For example, infants seem to evidence universal patterns of emotional expression (Ekman 1992; Ekman and Cordaro 2011) in response to common circumstances that they encounter, such as hunger, physical discomfort, and unfamiliar people. In fact, emotional expression allows infants and young children to convey their internal experience and elicit care that increases the chance of survival. Likewise, parents across communities, regions, and countries strive to promote their children's survival, health, and competence (Keller 2007). At the same time, culture is woven into the fabric of these universal features. Culture shapes how health and competence are defined, as well as the ways that children navigate their emotional landscape and coordinate their personal goals for wellbeing with the standards set by their family and larger community (Cole and Tan 2015). In this way, emotion socialization is embedded within the cultural context; it is shaped by, and contributes to, the values and standards of one's community (Boiger and Mesquita 2012; Cole and Tan 2015).

Historically, cultures have been defined by the degree to which they emphasize a collectivistic or individualistic orientation (Markus and Kitayama 1991; Triandis 1989). Among cultures with a collectivistic orientation (e.g., Japanese, Chinese, African Aka, Indian communities), parenting goals are thought to focus on interdependence, emphasizing relatedness, close physical contact, and rearing a calm infant with emotional control, so that the child's negative emotions do not interfere with family or community goals and wellbeing (Keller and Otto 2009). On the other hand, cultures with an individualistic orientation (e.g., Western European, North American communities) are likely to engender socialization goals centered around independence, autonomy, and emotional expressiveness. These parents are thought to prefer distal regulation, prioritize face-to-face contact, and encourage (and often amplify) positive emotions with their young children (Keller and Otto 2009). More nuanced views of cultural differences suggest that the balance between collectivism and individualism unfolds within a changing cultural milieu and is influenced by diverse social, political, and economic forces (Cole and Tan 2015; Raval and Walker 2019; Rothbaum et al. 2000).

1.4 Focus of the chapter

Guided by developmental and ecological frameworks, we view emotion socialization as unfolding in the context of dynamic interactions within and between multiple systems in which parent-child interactions are embedded (Bronfenbrenner and Morris 2006). We begin the chapter with a review of how emotion understanding develops and then turn to parenting practices that socialize this understanding in young children. Most research on children's emotional development has been positioned within a Western, educated, industrial-

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ized, rich, and democratic (WEIRD) framework; however, with the heightened focus on globalization and immigration in recent years, there is a clear call to integrate culture into the conceptualization of emotion socialization (Cole and Tan 2015). Therefore, we have integrated research from cross-cultural studies regarding how these processes vary in different cultural communities.

We also acknowledge that our chapter is limited in three ways. First, we cannot always address the meaningful within-group differences in socialization practices among members belonging to the same cultural group. Second, we focus on parents (and often mothers) as the primary socialization agents, even though siblings, peers, teachers, and others can play an important role in fostering children's emotion understanding. Third, we emphasize parents' contributions to children's emotion understanding, even though child characteristics (e.g., temperament, language skills, gender) influence this process as well.

2 Cultural considerations in the development of emotion understanding

2.1 Infancy

The foundation for children's emotion understanding is established during infancy and toddlerhood, even before children can verbalize their emotional experience (Taumoepeau and Ruffman 2006; Thompson and Lagattuta 2006). During the first year of life, infants express basic emotions including happiness, sadness, fear, and anger (Denham 1998). Over time, these expressions become more organized, and children develop stable patterns of emotional expressiveness (Camras and Shuster 2013; Planalp and Goldsmith 2019). Cross-cultural studies provide evidence of early differences in caregiving and emotional expression in infancy. For example, studies of two central African farming groups by Hewlett and colleagues (1998) and Meehan (2009) found that Aka caregivers held their infants more often, fed them more frequently and for longer amounts of time, and responded promptly to distress. In contrast, Ngandu caregivers stimulated their infants more, were more likely to let infants cry or fuss, held their infants less, and relied more heavily on distal communication. These early differences in caregiving behavior seemed to matter because by 9 months of age, the Ngandu infants were more expressive (i.e., smiled, played, cried, and vocalized more) than the Aka infants (Hewlett et al. 1998). Other work highlighting differences in infant emotional expressiveness comes from Camras and colleagues (1998), who found that Chinese infants were less expressive (i.e., smiled and cried less and showed less surprise) than Japanese and American infants. Taken together, this work highlights that even among cultures in which collectivism and relatedness are typically highly valued, there are differences in parenting behavior and infant emotional expression.

Infants develop the ability to recognize emotions within the first few months of life. In fact, by 3.5 months, infants can discriminate between maternal displays of happiness, sadness, and anger (Montague and Walker-Andrews 2002; Walker-Andrews et al. 2011). Between 5 and 7 months of age, infants become increasingly aware of the emotional expres-

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sions of others and can distinguish between happy and fearful facial expressions of strangers (Bornstein and Arterberry 2003), as well as between different categories of negative emotions (anger, sadness, fear) (Montague and Walker-Andrews 2001). In addition, 5-month-olds respond to happy or approving vocalizations with positive affect and to angry or prohibiting vocalizations with negative affect, even when spoken in unfamiliar languages (Fernald 1993). Between 9 and 12 months of age, infants begin to appreciate the ways in which emotions can convey useful information and guide behavior. In fact, they look to their parents' facial and vocal expressions of emotion to determine whether to approach or avoid unfamiliar people, events, and objects (e.g., Sorce et al. 1985). Given the salience of emotions in daily life, it is no surprise that infants come to understand their own and others' emotions relatively quickly.

As infants move into the second year of life, they begin to turn their attention toward those outside of the parent-child dyad and come to see others as intentional agents, with their own feelings, needs, and thoughts. In toddlerhood, children appreciate that people can differ in their preferences and in their reactions to the same event. For example, Repacholi and Gopnik (1997) found that 18-month-olds, but not 14-month-olds, reliably gave the experimenter the snack she desired even when it differed from the child's own preference. This awareness of their own and others' inner life lays the groundwork for emotion understanding into the preschool years.

2.2 Preschool years and beyond

2.2.1 Identifying emotional expressions and situations

During the preschool years, children become increasingly proficient at recognizing and then verbalizing labels for basic emotional expressions (Denham and Couchoud 1990; Shin, Krzysik, and Vaughn 2014). Young children identify happy expressions first (i.e., can distinguish between happy and not happy faces) and then gradually differentiate among negative expressions, with identification of sad faces typically coming before angry and fearful faces (Widen and Russell 2008). This same pattern holds for knowledge of emotion situations, as children are initially better at identifying happy and sad situations than those associated with anger or fear (Fabes and Martin 1991; Wang et al. 2014). Fearful situations seem to be the most difficult to identify, and when asked about common fear-inducing experiences, young children tend to associate these with sadness despite the potential for harm (Denham and Zoller 1991).

Interestingly, there are cultural differences in the extent to which children use situational cues to guide their judgements about emotion. For example, when 3- to 5-year-olds were presented with situations in which a character went from a happy to a neutral context or from a fearful to a neutral context, Japanese children were more likely than American children to select emotional expressions that corresponded with the contextual change (Kuwabara, Son, and Smith 2011). In contrast, American children used a trait-like approach and were more likely to retain the same emotional expression for the individual across contexts. Consistent with values of collectivism and an interdependent view of the self, it

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may be that Japanese preschool children are more attentive to contextual factors, as they hold important clues for how to tailor oneself to fit the needs of others and the demands of a particular situation.

2.2.2 Understanding the causes and consequences of emotions

Over the preschool period, children grow in their capacity to articulate logical and internally consistent causes of emotions. As children come to appreciate that emotions can vary in person-specific ways, they initially provide more elaborate explanations of their own emotions than they do of others' emotions. Younger preschool-age children are more likely than older children to give idiosyncratic causes of their emotions that, on the surface, seem counterintuitive. For example, a 3-year-old might say that she felt sad on the playground, and upon further prompting one might learn that other children were playing with the toys that she hoped to use during their time outdoors. Nonetheless, children do seem to know the typical causes of emotions and can give multiple causes for their own emotions. In general, children give nonsocial explanations for their happiness (e.g., playing, eating candy), social explanations for their sadness and anger (e.g., missing Mom, getting spanked), and fantasy explanations for their fear (e.g., monsters, ghosts, other imaginary creatures) (Denham and Zoller 1991). However, Palestinian preschool- and young school-age children generate more realistic and fewer imaginary causes of fear than American children, possibly because of greater exposure to real threats to safety in daily life (Kayyal and Widen 2015).

To understand the emotions of others, preschool-age children rely on facial and contextual cues, as well as a burgeoning awareness of others' internal states. Over time, children come to realize that a situation may not be evaluated in the same way by different people. Between ages 2 and 3 years, children begin to appreciate that desires and preferences influence feelings (e.g., people feel happy when they get something they want and angry when they cannot have something they want) (Wellman and Woolley 1990). By 4 years old, children develop an understanding that emotions can arise as a result of people's knowledge or beliefs about a situation (Wellman and Banerjee 1991), and between 5 and 6 years old, children come to understand that emotions can be based on expectations of future outcomes (Asaba, Ong, and Gweon 2019) and mistaken beliefs about the world (e.g., a peer will feel happy if she thinks her favorite cereal is in the box, even if the cereal is not actually there) (Ruffman and Keenan 1996). Over time, children also come to use dispositional qualities (e.g., personality traits) to determine how a person will feel in various situations. By 5 years old, children can predict how parents and others are likely to behave after experiencing particular emotions and how parents will react to children's emotions (Denham et al. 1997). As children grow in their understanding of the consequences of emotions, this knowledge can be used to regulate their emotions and guide behavior in social situations.

Children from cultures that emphasize collectivism may be more sensitive to the consequences of emotion, and in particular its effects on the thoughts, feelings, and behavior of others (Rothbaum et al. 2000). For example, parents in Japan emphasize and foster chil-

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dren's empathy from a young age so that cooperation and attending to the needs of others is prioritized over personal preferences (Azuma 1994). Likewise, by toddlerhood, Japanese children are less demanding, exhibit less anger and aggression, and are less likely to assert that they will not obey compared to US children (Winata and Power 1989; Zahn-Waxler et al. 1996). The focus on interpersonal harmony among those with a collectivistic orientation would seem to require that children learn the circumstances under which various emotions support or disrupt the well-being of others, as well as how to adapt their emotional experience in ways that conform to others' expectations and promote harmony within relationships. Although empathy and cooperation are also fostered in US children, the difference between communities is likely a matter of the degree to which others' inner states (e.g., needs, preferences, feelings) are prioritized over one's own (Rothbaum et al. 2000).

2.2.3 Talking about emotions

The onset of children's emotion language is reported to be between 18 and 20 months of age (Bretherton et al. 1986). By 28 months, children can discuss actions/events that led to a particular emotion and the motivation to behave in certain ways as a consequence of the emotion. Between ages 3 and 5 years, children's skill in talking about emotions improves rapidly. For example, children's ability to verbally articulate the antecedents, consequences, and behavioral correlates of emotions becomes more accurate, clear, and complex. Moreover, children begin to express awareness that emotional experiences can be regulated (Davis et al. 2010).

By the time children enter school, they can use a variety of emotion terms and synonyms (Ridgeway, Waters, and Kuczaj 1985; Shablack and Lindquist 2019), make longer and more complex causal inferences about interpersonal events, and verbalize plausible antecedents and consequences for emotions in hypothetical situations (Stein and Trabasso 1989). However, emotion labels that require a more complex understanding of interpersonal situations (e.g., guilt and pride) are not used appropriately until later. Talking about emotions can provide children with a more precise and flexible way of expressing their needs and goals for wellbeing, as well as offer a means of organizing and strengthening understanding of their own and others' emotional experiences and provide an additional mechanism for regulating emotions and behavior (Cole, Armstrong, and Pemberton 2010).

Cross-cultural research suggests that children from Western cultures (e.g., United States, Great Britain) refer to their own emotions and internal states more often than Chinese children, and American children talk more about the causes of emotion (Wang, Doan, and Song 2010). These differences are thought to result from socialization practices in which American parents encourage discussions about emotions in an effort to raise emotionally intelligent children, whereas Chinese parents emphasize discipline and behavioral standards over emotions, which can disrupt interpersonal harmony. In fact, when emotion conversations of mothers and their 3-year-old children were examined, Chinese dyads evidenced an "emotion-criticizing" style, focusing on norms and proper conduct with little explanation of emotions (Wang 2001). In contrast, American dyads employed an "emotion-explaining" style, which included highly elaborative conversations, focusing on the causes

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of the emotions and themes relevant to the child. This may explain why American children score higher than Chinese children on tests of emotion knowledge (Wang et al. 2006), as elaborative conversations about children's own internal states may help children to make sense of emotional situations (Bretherton and Beeghly 1982).

2.2.4 Advances in emotion understanding

There appears to be a developmental sequence that unfolds for advanced emotion understanding such that preschool-age children are often unable to discern more than one emotion from a story or situation, but by 5 years old, children have a growing awareness that multiple emotions can arise from one situation, especially with the aid of visual cues (Kestenbaum and Gelman 1995; Zajdel et al. 2013). Yet, children seem to be better at explaining multiple emotions than detecting them in oneself, especially for situations in which emotions of opposite valence might arise (e.g., feeling happy and sad at the end of a vacation). Between 6 and 7 years old, children indicate the possibility of feeling multiple emotions of the same valence at varying intensities, in response to one situation (e.g., feeling sad and angry when the waves wash away the sand castle you built). Between ages 7 and 11 years, children indicate feeling multiple emotions of varying intensities and valences in response to a situation (Heubeck et al. 2016; Wintre and Vallance 1994).

Although self-conscious and social emotions (e.g., pride, embarrassment, guilt, empathy) are evident in toddlerhood (e.g., Sloane, Baillargeon, and Premack 2012; Thompson, Goodvin, and Meyer 2006), the ability to understand and accurately identify these emotions emerges in middle childhood (e.g., Arsenio and Kramer 1992; Muris and Meesters 2014; Olthof et al. 2000). Preschool-age children seem to know the valence of these emotions but cannot identify situations that might elicit them (Russell and Paris 1994). When young children achieve a goal, they are more likely to report feeling happy than proud, and they are more likely to indicate feeling bad rather than guilty or ashamed for misbehavior (Arsenio and Kramer 1992; Barden, et al. 1980). These emotions may be more difficult to identify because they require a stable sense of self, are not associated with distinctive facial expressions (Harris et al. 1987), involve behavioral reflection and self-evaluation, and generally require more adult guidance (see Muris and Meesters [2014] for a review). However, the understanding and expression of self-conscious emotions appears to be strongly influenced by one's cultural context. For example, Japanese children are more likely to experience shame and guilt and have a greater sense of responsibility for their behavior than American children (Bear et al. 2009), and American children report experiencing more pride than Japanese and Korean children (Furukawa, Tangney, and Higashibara 2012). Recent work also suggests that Chinese immigrant children (7–10 years old) have greater knowledge of self-conscious emotions (i.e., fear and pride) than European American children (Yang and Wang 2016).

With respect to understanding the complexity of others' emotions, children come to appreciate that the same situation may be appraised in different ways, evoking divergent emotions from others. Though effortful at first, preschool-age children can indicate when someone else's emotion would be different from their own, especially when emotions of

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opposite valence are contrasted (e.g., the child is excited to see a dog, while a peer is scared) (Denham et al. 2002). However, children have more difficulty when the same situation elicits two plausible negative emotions or when people have uncommon reactions to emotional situations (Gnepp and Klayman 1992). In addition, when contextual and facial cues conflict, preschool-age children rely on facial cues to determine the emotion, while older children increasingly use situational clues to infer someone else's emotion (Gnepp 1983). In fact, by adolescence, children do not display a preference but rather consider both facial and situational clues to make a judgement about another's emotion (Gnepp 1983). Children's ability to reconcile conflicting emotional cues improves with age (Gnepp 1983). As children move beyond the preschool years, they become more adept at incorporating relevant personal information (e.g., personality characteristics, behavioral tendencies, past history or experience, norms of the particular community or cultural groups) to address discrepancies in emotional cues (Denham 1998; Gnepp, Klayman, and Trabasso 1982). For example, a 4-year-old who loves the swings at the playground may not fully understand why his older sister avoids the swings as a result of being pushed off a swing while in mid-air when she was younger.

2.2.5 Knowledge of display rules

Display rule knowledge increases with age and refers to children's understanding of when and how to regulate the outward expression of emotion for cultural, prosocial, and self-protective reasons (Taylor and Harris 1984; Wu, Wang, and Liu 2017). Even though children as young as 3 years old can mask their emotions during a disappointment task (Cole 1986), they are not necessarily consciously aware of social display rules. Parents have likely taught their children how to behave during events that have the potential to be unpleasant or disappointing for them. This behavioral rehearsal may lead to children's dissemblance (i.e., expressing an emotion that differs from what is felt), but not necessarily the knowledge that displaying contentment in the midst of disappointment is appropriate and protects the feelings of others.

Perhaps young children can internalize the social rules, but it is not until they have developed the language skill to reflect on their own and others' emotions and behavior, that they can articulate display rule knowledge. Consistent with this reasoning, 4- and 5-year-old children are able to accurately say how another appears to feel based on facial expressions, but 5-year-olds are more accurate than 4-year-olds in their understanding that there may be discrepancies between how another appears to feel based on outer appearance and how they actually feel internally (Gross and Harris 1988). However, when the language and memory demands are reduced, children as young as 3 years old appear to understand the difference between internal experience and the outward expression of emotion (Banerjee 1997). By 6 years old, most children can communicate their knowledge of display rules in complex ways, describing the causes and consequences of masking emotion (Gnepp and Hess 1986). Display rule knowledge is related to social competence among school-age children, especially for children who understand when to mask positive and negative emotions and for those who can articulate prosocial reasons for masking emotions (McDowell and Parke 2009).

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Given cultural differences regarding social conduct, it is not surprising that children differ in their understanding and use of display rules (Cole, Bruschi, and Tamang 2002). For example, Indian girls understand the distinction between expressed and felt emotion earlier than Indian boys and British children (Joshi and MacLean 1994). In addition, Cole and colleagues (2002) found that by second grade Brahman children (high-caste Hindus in Nepal) understood that one's inner emotional experience can differ from what is expressed, and they were more likely to conceal anger than Tamang (indigenous people of Nepal) and American children.

2.2.6 Knowledge of coping strategies

Preschoolers have an emerging understanding of how to manage emotions, and as such suggest problem-focused solutions to alleviate anger and behavioral distraction to reduce sadness (Dennis and Kelemen 2009). Remarkably, children as young as 3 years old have an explicit awareness that cognitive and behavioral distraction, as well as problem-focused repairs of the situation are more effective ways of decreasing negative emotions than rumination, venting, and telling mother. Although 4-year-olds generate and recognize more strategies for regulating anger than 3-year-olds, children of both age groups are comparable in their understanding of strategies for regulating sadness (Cole et al. 2009). School-age children (5–12 years old) also take the controllability of the situation into account, such that they report using problem-focused coping in situations perceived as controllable (e.g., peer problems, school failure) and emotion-focused coping in less controllable and less familiar situations (e.g., medical emergencies, physical accidents) (Altshuler and Ruble 1989; Band and Weisz 1988; for a review, see Zimmer-Gembeck and Skinner [2011]).

Children are even motivated to intervene to help others manage their emotions, especially in cases of sadness and anger (Carlson, Felleman, and Masters 1983), possibly demonstrating a sense of efficacy in their ability to change inner states. Preschool-age children are aware that nurturance elicits happiness in others and aggression elicits anger and/or sadness. Older children (8- and 12-year-olds) suggest more social and verbal interventions than younger children (5-year-olds) to alleviate another's negative emotion, whereas younger children suggest more material interventions, like sharing toys (McCoy and Masters 1985).

The coping strategies that young children select when faced with emotionally arousing situations varies by culture, as well. Zahn-Waxler and colleagues (1996) examined the responses of Japanese and American children to hypothetical situations of conflict and distress, such as seeing one's parents leave for a trip or having another child knock over one's tower of blocks. In response to distressing situations, American children indicated that they would resolve the situation through aggression more so than Japanese children, but there were no significant differences in children's use of prosocial strategies (i.e., attempting to relieve another's distress) or avoidance strategies across cultural groups. When faced with hypothetical interpersonal conflict situations, American children reported that they would use all three types of strategies (aggression, prosocial, avoidance) more so than Japanese children. The differences in how American and Japanese children cope with situations of conflict and distress may reflect the child-rearing values of the respective cultures.

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For example, American mothers were more encouraging of emotional expressivity which was associated with child problem solving through aggression. Japanese mothers, on the other hand, reported using guilt and reasoning to discourage antisocial behaviors like aggression and used negative emotion in response to these behaviors in their children, which may be reflected in the limited use of this strategy in Japanese children (Zahn-Waxler et al. 1996).

3 Parent socialization of emotion understanding

Universally, parents share the goal of raising their children to be emotionally competent adults; however, culture can dictate parents' views about what appropriate emotional development looks like. In Western nations like the United States, Australia, and Germany, an individualistic idea of emotion competence is most widely accepted. These cultures value self-sufficiency, autonomy, self-expression, and self-esteem, which is reflected in the way parents socialize their children's emotions (Trommsdorff, Cole, and Heikamp 2012). Caregivers are accepting of children's negative emotions and encourage their expression. When children are distressed, parents offer support and comfort, while scaffolding self-regulation. On the other hand, in East-Asian societies, social harmony, group interests, and hierarchical relationships are valued and reflect a relational view of emotional competence. Caregivers in these societies teach children "other-focused" emotions like empathy and shame and respond to "socially disengaging" emotions (e.g., anger) in discouraging ways that demonstrate they are disruptive to the group (Friedlmeier, Corapci, and Cole 2011). We focus on three ways that parents socialize emotions in young children: modeling, explicit discussion, and responses to child emotions.

3.1 Parental modeling and expression of emotion

Modeling, or how parents show their own emotions, is an important component of emotion socialization. Children actively attend to the world around them, and the rich emotional landscape of the parent-child relationship provides many opportunities for children to learn about emotions (Denham 1998). By virtue of parental modeling of emotional displays, children's emotion understanding is fostered in at least four ways: (a) parents implicitly teach children which emotions are acceptable to show, how to express these emotions, and the situations that elicit these emotions; (b) parents demonstrate how to manage emotional experiences; (c) parents provide children with the opportunity to learn how others react to different feelings; and (d) parents create an emotional environment within the family (Denham 1998). As parents model emotional behavior and express a range of emotions, they are socializing children in ways that convey cultural messages about emotion (Cole and Tan 2015). In Italian culture, for example, liveliness is considered a socialization goal for young children. Mothers model this emotional state by expressing a wide range of positive emotions for their young children. Additionally, the Italian value of liveliness requires that infants be socially active and affectionate, thus evidence suggests that Italian mothers re-

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spond to their infants in more social and affectionate ways than American mothers do (Hsu and Lavelli 2005).

Parental emotions are thought to organize parenting behavior and reflect the quality of the parent-child relationship (Dix 1991). Emotions mobilize parents' resources to respond to their child and motivate their efforts to console, defend, discipline, and stimulate their children. Emotion and cognition are interwoven because emotional states influence which information is attended to, how that information is processed, and the interpretation of the information (Bugental and Goodnow 1998; Pessoa 2010). Parents who lack emotional engagement, such as those who are depressed, tend to be cold, unresponsive, and low in limit setting (Bousha and Twentyman 1984; Field 1994; Pelaez et al. 2008). Notably, infants across cultures are equally disturbed by flat affect and unresponsiveness from parents. For example, Kisilevsky and colleagues (1998) presented Chinese and Canadian parent-infant dyads with the still-face procedure, which consisted of three 90-second episodes, separated by 5-second intervals. In this procedure, infants were placed in an infant seat and parents were positioned directly in front of the infant. In episode 1, parents were instructed to play normally with their infant. In episode 2, parents were instructed to look at their infants in a neutral way, without facial or vocal expressions (i.e., the still-face episode). In episode 3, parents were instructed to interact with their baby normally, using any expressions and touching that they felt were appropriate. During the inter-episode intervals, parents turned away from the infant briefly (about 5 seconds) to receive instructions for the next episode. Findings from this study revealed that both Chinese and Canadian infants appeared equally upset by the still-face episode.

When parent behavior was examined in the still-face procedure, Liu et al. (2013) found that Chinese American (first- and second-generation) and European American mothers displayed similar emotional responses to their infants before the still-face (i.e., episode 1). However, after the still-face (i.e., episode 3), first-generation Chinese American mothers showed less positive emotion and greater neutral or negative emotion toward their infant compared to second-generation Chinese American and European American mothers. It may be that mothers who are more acculturated to the US try harder to stimulate positive emotions from their infant after a stressor, as high intensity positivity is thought to be valued in individualistic cultures. In contrast, mothers with a more collectivistic orientation may prefer infants to be calm after a stressor and may use negative emotion to demonstrate that infant distress is unacceptable and disrupts interpersonal harmony. Other work has shown that Ecuadorian mothers use more nurturing touch and US Hispanic mothers use more playful touch before the still-face (Lowe et al. 2016). Playful touch was associated with increased infant positivity, which again highlights the possibility that mothers from individualistic cultures strive to amplify infant positivity.

Within the family context, parents who regularly experience positive emotions are thought to view their children more positively, have the cognitive resources available to appropriately monitor and attend to child behavior, and use situations that arise as opportunities to teach their children (Dix 1991; Smith and Stephens 2018). Moreover, when parents express positive emotion, this tends to elicit enthusiasm and cooperation from children (Lay, Waters, and Park 1989), support children's ability to process parental messages, and decrease children's propensity for over arousal. Accordingly, parents' positive emotion-

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al expressiveness within the family and during interactions with their child is associated with healthy developmental outcomes for children, including secure attachment (Denham 1993), positivity (Denham et al. 1997), social competence (Boyum and Parke 1995; Denham et al. 1997), emotion understanding (Dunn et al. 1991; Denham et al. 1997), and prosocial behavior (Bronstein et al. 1993), as well as fewer hostile interactions, behavior problems, and internalizing symptoms (Matthews et al. 1996; Lindahl 1998). Mothers' positive emotional responsiveness is also associated with child emotion situation knowledge and child emotion language (Denham, Zoller, and Couchoud 1994).

Although mothers across cultures express warm, positive emotions with their children, the frequency and intensity of these emotional expressions vary among parents from different cultural backgrounds. White mothers from European backgrounds (e.g., Italian, American, German) tend to value and express positivity, whereas mothers from Asian countries and those from rural, less developed countries tend to be emotionally neutral. Perhaps, this pattern of emotional expressivity reflects the value of independence in Western, industrialized countries and the value of relatedness in Asian and rural communities (Keller and Otto 2009). For example, German mothers interact with their infants in ways that sustain positive emotion, often responding to crying with positive expressions and attempts to determine what the child needs. Furthermore, their interactions are characterized by smiling, laughing, and warmth. They ask their infants questions, infer their emotional states, and praise infant behavior, highlighting the early emphasis on autonomy and development of the self-concept in this culture (Keller and Otto 2009). In addition, when Argentine, Italian, and US mothers were compared, researchers found that Italian mothers were more sensitive and used more structuring, and Italian toddlers were more responsive than the other two groups (Bornstein et al. 2008). Among Japanese mothers, however, encouragement of children's emotional expressivity is less common, with mothers placing more emphasis on psychological discipline (Zahn-Waxler et al. 1996).

All parents experience negative emotions, but when and how parents express their negative feelings varies by culture (Cole and Tan 2015). For example, in response to child misbehavior, Asian parents are more likely to use shame, love withdrawal, and criticism to express disapproval compared to American parents (Chen et al. 1998), and Asian parents are more likely to express negative emotions in response to child failure than American parents (Ng, Pomerantz, and Lam 2007). Additionally, cultures vary with respect to how parental negative emotionality is perceived and the meanings attached to negative emotionality within the context of disciplinary practices (Cole and Tan 2015). In fact, an international study of school-age children from China, India, Italy, Kenya, Philippines, and Thailand found that across countries, when children perceived strict, control-oriented disciplinary practices (i.e., yelling, corporal punishment, and expressing disappointment) as normal in their community, the association between these practices and child aggression and anxiety was weakened (Gershoff et al. 2010).

Even among cultures that value authoritarian parenting styles, there are times when parent stress and mental health problems may interfere with culturally appropriate displays of negative emotion toward children (Cole and Tan 2015). For example, when parents are unable to effectively manage intense or prolonged negative emotions, this can disrupt parenting by creating a propensity in parents to view children negatively, cultivating an

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unpredictable and hostile family environment, impeding parental monitoring and attention, and hindering parental problem solving and reasoning (Goodnow 1988; Morelen, Shaffer, and Suveg 2014; Patterson 1982). Because emotional expression is often a reciprocal process, parents who express intense negative emotion toward their children are also more likely to elicit irritation and disappointment from their children, which may then contribute to the escalation of coercive interaction (Patterson, Dishion, and Bank 1984). In addition, distressed parents are likely to speak loudly and harshly, which can engender fear and dysregulation within children, such that they are less able to attend to and remember parental messages. Poorly regulated negative emotionality, as well as an emphasis on negativity in the absence of parental warmth and support, is likely a risk factor for child maladaptation across cultures regardless of culturally specific values and styles.

3.2 Parent discussions about emotion

Talking about emotions and emotional situations is one way that parents socialize their children to be emotionally competent (Bretherton et al. 1986; Brownell et al. 2013; Denham, 1998; Dunn, Bretherton, and Munn 1987; Eisenberg, Cumberland, and Spinrad 1998; Gottman and DeClaire 1997). Parents' use of emotion language is expected to help children develop this language, reflect on their own experiences, and recall information that will help them manage challenging situations in the future (Haden, Haine, and Fivush 1997; Harley and Reese 1999). Parent and child emotion talk is related to children's concurrent and later emotion knowledge and perspective taking (Laible and Song 2006; Martin and Green 2005; Mcquaid et al. 2008).

What is particularly notable is that during the late toddler and early preschool years when children are emotionally expressive, their emerging language skills offer a vehicle for understanding their experiences and moving toward more effective ways of dealing with them (Kopp 1982; Roben, Cole, and Armstrong 2013). Parents who talk about emotions with their children can encourage certain patterns of expression, help children attend to the emotional features of situations, and facilitate awareness and understanding of emotions. Emotion language is thought to allow parents to be specific in teaching children how to feel, what to say, and what to do (Denham 1998). Furthermore, talking about emotional situations gives parents the opportunity to link present or recent events with past and future events, encouraging forethought, as well as a better understanding of oneself and emotions (see Fivush [2007] for a review).

Cultural values and beliefs influence the way that parents talk with their children about emotions. This influence begins in infancy. For example, US mothers often direct an infant's attention toward objects and provide the infant with information about the environment, possibly reflecting the cultural value of knowledge acquisition. On the other hand, Japanese mothers use more affect-laden speech, characterized by terms of endearment with infants, perhaps reflecting the cultural value of contentment and emotional dependence on family (Bornstein et al. 1992; Cole and Tan 2015; Toda, Fogel, and Kawai 1990). Moreover, Chinese parents talk with their children frequently about the emotions of others but tend to speak less about the child's own emotions (Wang 2001). This may reflect the Chinese value of emotional constraint.

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There are also cultural differences regarding the specific emotions on which parents focus their socialization efforts (Friedlmeier, Corapci, and Cole 2011). Asian parents talk to their children about shame more so than US parents because it represents an understanding of the harm one has caused another and helps to keep the group intact (Levy 1984). Even in cultures that share similar values, emotion talk can differ. For instance, Hindu and Buddhist parents both believe that anger is not a useful emotion; however, Hindu parents explain and discuss with children the reason that anger is problematic, whereas Buddhist parents tend to shame the expression of anger in children (Cole, Bruschi, and Tamang 2002; Raval and Martini 2011). Through parent-child discussions about emotion, children develop the ability to think about emotional states in ways that align with cultural values and practices.

3.3 Parental responses to child emotions

The way parents react to children's emotions (also called contingencies) is a third mechanism of emotion socialization. According to the contingency hypothesis, "parents' own expressed emotions and behaviors are likely to be contingent on their young children's emotional displays" (Denham 1998: 117). Parent reactions teach children the emotional significance of events, as well as which behaviors and expressions are appropriate in the context of different feelings. There are two types of parental reactions to children's emotions – rewarding and punishing – and these reactions are integral to shaping children's emotional understanding and expressiveness (Denham 1998; Zeman, Cassano, and Adrian 2013).

Rewarding reactions help children maintain positive emotions and teach children that their negative emotions are valid and worthy of attention. Parents who value and encourage children's emotions take children's internal experiences seriously and listen attentively to children when they are emotional. They also inquire about children's emotional experiences to ensure understanding and reassure the child that they will protect him/her (Denham 1998; Lunkenheimer, Shields, and Cortina 2007). In contrast, parents who react negatively, or punish children's emotions, can disrupt emotional development (Sanders et al. 2015). Some parents feel contempt and anger toward children's emotional expressiveness, possibly because it interferes with parental goals or standards for child behavior. In fact, parents who report that their children are easy to deal with are more accepting of their children's emotions, but parents who feel anger toward their children are more likely to attempt to control their children's emotional responses (Denham 1998). Other parents may dismiss the child's emotional experience and view it as something that will "blow over" or as insignificant. Still others may take a "laissez-faire" approach, accepting any emotional expression from the child and relying primarily on distraction to manage child emotions, even when other regulation techniques may be more adaptive. This type of contingency can often include bargaining and bribery to stop a child's negative emotional expression (Denham 1998). Most parents likely encourage *and* discourage children's emotions in daily life depending on the demands of the situation and parental goals, and therefore it is parents' relative emphasis on each approach that may matter.

Interesting cultural trends have been found in the way that parents respond to children's emotional expressions. In general, East Asian parents discourage emotional express-

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iveness in children and prefer emotional restraint and calmness (Chen et al. 1998). In fact, Korean and Asian American parents report greater parental control, including suppression and shaming, than European American parents, and in turn, Korean and Asian American children express less sadness and exuberance during emotion-eliciting tasks than European American children. Although parental control is associated with greater child anger for European American families, this is not the case for Asian families (Louie, Oh, and Lau 2013). Parental control may be more widely accepted and used among Asian families, thus influencing the effect on the child.

Across cultures, parents tend to respond to submissive negative emotions, like sadness, in supportive, helpful ways. However, the reasoning behind this socialization practice may differ. Cheah and Rubin (2004) found that Chinese parents respond to sadness in a supportive manner to encourage the child to conform to social norms, but US parents respond in a supportive manner to help the child feel good about him/herself again. While parents may respond similarly to sadness across cultures, this pattern does not hold for children's expressions of anger. For example, US mothers report feeling less supportive of child anger than sadness (Shipman et al. 2007). As another example, Hindu philosophy emphasizes interdependence and avoidance of social disruption; consistent with these values, Indian and Indian-American mothers are less accepting of children's expressions of anger and sadness than European-American mothers. Accordingly, Indian and Indian-American mothers who adhere more strongly to Hindu beliefs are also more likely to minimize their children's negative emotions and have children who report greater masking of sadness and anger (McCord and Raval 2016; Raval and Martini 2009).

4 Conclusions

Emotion understanding is an integral part of children's development into competent adults. Starting in infancy and continuing throughout the lifespan, children come to understand their own and others' emotions in ways that align with the beliefs, values, and standards of their culture. Parents play an important role in fostering children's emotion understanding through multiple socialization mechanisms, including modeling, explicit discussion, and responses to child emotions. Increasing globalization and immigration underscore the importance of considering emotion socialization from a cultural perspective and suggest avenues for future research.

From a universal standpoint, the capacity to understand emotions has implications for child wellbeing, and parents help their children interpret, express, communicate, and think about emotions in ways that are consistent with their cultural values. However, less is known about the nuances across cultural contexts and the mechanisms by which socialization goals are translated into caregiving practices. There are many questions that have the potential to shed light on these processes. For example, what drives socialization goals for parents of different cultures? How do factors such as minority-majority status, geographic features, community context, and practical demands influence caregiving and parents' socialization goals? How does parental scaffolding of emotion understanding vary based on characteristics of the child across different cultural milieus? How do parents understand

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their culture and the effects of cultural values and standards on their own beliefs and practices? It is clear that this is an area ripe for future research, and the integration of ecological and developmental approaches offers a promising avenue for elucidating the pathways by which culture influences family emotional processes.

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45 Emotional and verbal communication in the family

1 Introduction
2 Children's communication with emotion
3 Communication about emotion
4 Parents' emotional communication
5 Summary and directions for future research
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Abstract: Families communicate not only verbally, but also emotionally, and they communicate both *with* and *about* emotions. Yet surprisingly little research integrates the study of parent-child emotional and verbal communication. In this chapter, we summarize developmental changes in children's emotional communication and in family communication about emotions. We highlight the role of parent emotion expression in two domains: child language development and parental emotion socialization practices. We discuss gaps in the literature and future directions for research, advocating for integrated measurement of both emotional and verbal communication that captures family communication in dynamic and ecologically valid ways.

1 Introduction

Emotions and language are interrelated communication systems (Bloom, Tinker, and Scholnick 2001; Cole, Armstrong, and Pemberton 2010). Being a competent communicator involves sending and receiving verbal and emotional messages in a manner that communicates thoughts, plans, feelings, and desires effectively and appropriately, in service of achieving interpersonal goals (Greene and Burleson 2003; Halberstadt, Denham, and Dunsmore 2001; Saarni 1999). Effective communication involves many skills, including receptive and expressive language skills, emotion understanding, the ability to regulate emotional arousal and modulate emotional expression, and the ability to integrate emotional and verbal communication (Greene and Burleson 2003; Halberstadt et al. 2001; Saarni 1999). These foundational skills largely develop in the context of the family; parents are believed to be critical in fostering and integrating the verbal and socioemotional skills children need to become competent communicators (Cole et al. 2010).

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Family verbal communication is considered a primary vehicle for socialization, and it facilitates development in language, cognitive, and socioemotional domains (Fivush 1993; Kochanska and Thompson 1997; Laible 2004; Thompson 2006). Yet families do not communicate solely with speech. Emotions are ubiquitous in everyday family life, serve important communicative and socialization functions within the family, and also contribute to child socioemotional outcomes (Denham, Bassett, and Wyatt 2007; Eisenberg, Cumberland, and Spinrad 1998). However, emotional and language development, and the communication processes that support the development of competence in these domains, are often studied separately (Calkins and Bell 2010; Cole et al. 2010). Surprisingly little research on parent-child communication integrates the study of parent and child emotion expression and speech. Yet families communicate with both language and emotions, and they communicate about emotions and emotional experiences (Barrett and Nelson-Goens 1997; Cole et al. 2010; Fivush 1993; Kochanska and Thompson 1997). In this chapter, we summarize the relevant literature on children's emotional communication, parent-child communication about emotion, and the role that parents' emotional communication plays in child language development and in parental emotion socialization practices. We take a developmental perspective, focusing on parent-child communication in early childhood, but also summarize research on middle childhood and adolescence. We conclude by highlighting gaps in our knowledge about family emotional and verbal communication, and by outlining potential directions for future research.

2 Children's communication with emotion

One of the primary functions of emotion is to communicate (Barrett and Campos 1987). This may be particularly true in the context of parent-child communication, especially early in development, when young children have limited capacity to communicate with verbal language. Below, we summarize developmental changes in children's emotional communication, including the changing role of emotions in parent-child communication and the increasing integration of emotional and verbal expression. Where possible, we contextualize this discussion by highlighting research addressing whether and how emotional communication influences or is influenced by child language development.

2.1 Early childhood

In the first year of life, emotion expressions are the predominant way that infants communicate. Infants' emotion expressions elicit responses from parents and support reciprocal communicative routines between parent and infant, which serve as precursors to verbal conversation and foster early language acquisition (Ainsworth and Bell 2015; Casillas 2014; Moreno and Robinson 2005; Nicely, Tamis-LeMonda, and Bornstein 1999; Heck et al. this volume).

It is well-established that emotions play a central role in parent-*infant* communication; however, beginning with the onset of expressive language, studies of early language acqui-

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sition and the communication processes that support language development generally exclude emotion expressions from analyses (Tamis-Lemonda et al. 1996). Yet we know that young children continue to communicate with emotion. In fact, the expression of both positive and negative emotion peaks in the second year of life, for parents and children alike (Barry and Kochanska 2010; Lewis et al. 2004; Potegal, Kosorok, and Davidson 2003; Raikes et al. 2007). This may be due to the increase in toddler autonomy assertion, the onset of parent socialization practices that increasingly manage and place restrictions on toddler behavior, and the related peak in parent-toddler conflict around this same time (Dunn, Bretherton, and Munn 1987; Kochanska and Aksan 2004; Laible and Thompson 2007). Yet it may also be because young children (and their parents) continue to rely on emotions to communicate as children's verbal skills are still emerging.

Across early childhood, the role that emotions play in parent-child communication appears to change dramatically as children's language abilities rapidly develop. Toddlers' positive emotion expressions appear to encourage parent responsiveness and parental engagement with young toddlers in verbal conversation (Fields-Olivieri, Cole and Roben 2020; Kochanska et al. 2004). On the other hand, it is thought that *negative* emotion expressions begin to discourage or disrupt parent-child verbal interaction in the toddler period (Kubicek and Emde 2012; Slomkowski et al. 1992). Initially, emotion appears to interfere with children's speech, such that young children have difficulty speaking while expressing emotion, particularly when experiencing negative or intense emotions (Bloom and Beckwith 1989; Bloom et al. 2001). Moreover, as children acquire expressive language, parents may become less willing to treat negative expressions as communicative; parents become less responsive to negative emotional cues (Bornstein et al. 1992; Kochanska and Aksan 2004) and increasingly responsive to more advanced communicative behaviors, such as speech and gestures (Bornstein et al. 2008; Gros-Louis et al. 2015; Tamis-LeMonda, Kuchirko, and Song 2014). This may help explain why children who express more negative emotion tend to develop poorer language skills or develop expressive language more slowly (Dixon and Smith 2000; Kubicek and Emde 2012; Noel, Peterson, and Jesso 2008). However, when parents *do* respond to toddlers' negative emotions, their responses often serve to encourage or facilitate a shift to verbal communication (Fields-Olivieri and Cole 2019). These findings suggest that young children's emotions play an important and complex role in parent-child verbal communication. More research incorporating both verbal and emotional expression is needed to understand the communicative processes linking children's emotional and language development.

Across early childhood, there is a gradual decline in child emotion expression (Barry and Kochanska 2010; Lewis et al. 2004; Potegal et al. 2003; Raikes et al. 2007). Moreover, as young children's verbal skills improve and language becomes less effortful, children are more able to simultaneously express themselves emotionally and verbally (Bloom and Beckwith 1989; Bloom et al. 2001). The decline in negative emotion expression is largely attributed to an increase in children's emotional and behavioral self-regulatory abilities (Cole et al. 2011; Raikes et al. 2007). However, this may also be due to the fact that young children have acquired a more effective way of communicating: using their words. Being able to understand and be understood may reduce young children's frustration (Kwon et al. 2013), and moreover, children's language skills may contribute to declines in anger expres-

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sion by supporting children's use of regulatory strategies (Cole et al. 2009; Roben, Cole, and Armstrong 2013). Thus, across early childhood, children acquire the ability to communicate verbally and to regulate their emotions. Children's reliance on emotions, and parents' acceptance of emotions as communication tools, appear to decline, and children increase their ability to express themselves verbally even while experiencing emotions.

2.2 Middle childhood

Children's emotional communication in middle childhood is understudied. Existing research suggests that increases in verbal abilities and self-regulation and decreases in parent-child disciplinary interactions contribute to decreases in the frequency, intensity, and duration of children's negative emotion expression relative to early childhood (Collins, Madsen, and Susman-Stillman 2005; Nippold 2007; Sears et al. 2014; Tolchinsky 2004). Moreover, whereas negative emotions, like anger, are often communicated with physical behaviors during early childhood (Potegal and Davidson 2003), school-age children tend to communicate their negative emotions vocally and less disruptively (e.g., by whining, sulking, withdrawing; Collins et al. 2002; Sears et al. 2014).

2.3 Adolescence

Adolescence is often characterized as a period of "storm and stress", during which there is a normative increase in intensity of emotions, increased risk for mood disruptions, and changes in the frequency and intensity of parent-child conflict (Allen and Sheeber 2008; Hollenstein and Lougheed 2013; Laursen, Coy, and Collins 1998; Sallquist et al. 2009). Yet, likely aided by significant advances in social cognitive abilities (e.g., perspective taking, abstract thinking; Steinberg 2005) and in independent emotion regulation (Booker and Dunsmore 2017), adolescents appear to become more competent at integrating emotional and verbal communication in service of achieving interpersonal goals. During interpersonal problem-solving or conflict, they use more positive strategies (e.g., politeness, bargaining) and fewer negative strategies (e.g., whining, begging) in these exchanges (Nippold 2007; Tolchinsky 2004). However, they also appear to become more skilled at expressing negative emotion in constructive ways (e.g., in service of conflict resolution, Booker and Dunsmore 2017; von Salisch 2001).

2.4 Summary

Across development, changes in young children's verbal and self-regulatory capacities and in parent-child interactions result in changes in the frequency, modality, and function of emotion in parent-child communication. Children's expression of emotions (particularly negative emotions) declines across early childhood, as they acquire the ability to regulate their emotions and to communicate verbally. Children become increasingly skilled at inte-

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grating speech and emotion to communicate, and at communicating with emotion in ways that help achieve interpersonal goals. Peaks in emotion expression frequency and intensity and in parent-child conflict in early childhood and in adolescence make these two development periods particularly interesting for the study of communication with – as well as *about* – emotions in the family.

3 Communication about emotion

Emotion socialization refers to the process by which adults foster and influence children's emotion understanding, expression, and regulation (Eisenberg et al. 1998); this involves communication *about* emotion, including discussions of emotional experiences and responses to child emotion expression. Below, we summarize developmental changes in parents' and children's communication about emotion, including how these practices influence children's socioemotional development.

3.1 Early childhood

Early childhood is considered to be a particularly important developmental period for emotion socialization, given the dramatic normative changes in young children's capacities (Calkins and Bell 1999; Raikes et al. 2007). As young children's verbal abilities emerge, parents are increasingly able to use language as a socialization tool (Brownell and Kopp 2010; Cole et al. 2010; Edwards and Liu 2005).

Many studies on early emotion socialization focus on parents' "emotion talk", their labeling of young children's emotions. Between 18 and 24 months, mothers increase their references to feelings, labeling both the child's and others' emotion. Many children begin spontaneously using these terms themselves by 24 months and increase their use of emotion terms across the preschool period (Brown and Dunn 1991; Cervantes and Callanan 1998; Dunn et al. 1987). Parents' references to emotions predict children's own emotion talk and support the development of children's emotion recognition and emotion understanding (Brown and Dunn 1991; Denham, Cook, and Zoller 1992; Denham, Zoller, and Couchoud 1994; Taumoepeau and Ruffman 2006, 2008). Importantly, the quality of parental emotion talk appears to be crucial. More than the mere use of emotion labels, parents' explanations about emotions and engagement with their children in conversation about emotions predict social cognitive development, emotion understanding, and emotion regulation abilities (Denham et al. 1992; Ensor and Hughes 2008; Garner et al. 1997). As expressive and receptive language skills continue to advance in the late toddler and preschool period, parents and children are able to have longer and more elaborative conversations about emotional experiences and about the causes and consequences of emotions (Cervantes and Callanan 1998; Fivush, Haden, and Reese 2006; Lagattuta and Wellman 2002).

Emotion talk is often studied during structured activities such as wordless book reading or while talking about past emotional experiences (e.g., Fivush 1993; Garner et al. 1997). A separate research literature examines how parents socialize emotions by responding to

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and communicating about them in the moment. Across early childhood, parents decrease the extent to which they respond to their young child's distress by soothing, removing stressors, or using physical strategies; instead, parents increasingly respond to emotions using verbal strategies (Capatides and Bloom 1993; Karraker, Lake, and Parry 1994). Parents label emotions relatively infrequently during negative emotional events (Capatides and Bloom 1993; Howe, Rinaldi, and Recchia 2010; but see Dunn and Brown 1994), but use other strategies such as distraction, providing information, or using explanations (Capatides and Bloom 1993; Karraker et al. 1994; Spinrad et al. 2004). These emotion socialization practices foster the ability to regulate emotions independently later in early childhood (Eisenberg et al. 1998; Spinrad et al. 2004).

3.2 Middle childhood

During middle childhood, supported by significant advances in children's socioemotional understanding and social-cognitive abilities, parents can also rely on more sophisticated verbal strategies for emotion socialization (Beck et al. 2012; Collins et al. 2002; Raikes and Thompson 2005). Many studies of emotion socialization during middle childhood focus not only on emotion talk, but on a broader set of strategies known as emotion coaching, which involves noticing, labeling, and validating their child's emotions, and problem-solving with their child about emotion regulation strategies or about the situation that elicited the emotion (Gottman, Katz, and Hooven 1996). Parents vary in their openness to having conversations with their children about emotions, and in the degree to which they encourage and discuss, rather than minimize, dismiss, or punish, their children's emotional displays (Gottman et al. 1996). Emotion coaching practices are generally associated with the development of socioemotional competence, including emotion understanding and emotion regulation, whereas parents' emotion dismissing is associated with emotion regulation difficulties, behavior problems and internalizing symptoms (Katz, Maliken, and Stettler 2012; Lunkenheimer, Shields, and Cortina 2007). Notably, however, there appears to be a normative increase in parents' dismissive responses to children's emotions across middle childhood (Lunkenheimer et al. 2007).

3.3 Adolescence

While peers become increasingly influential in adolescents' socioemotional development and well-being during adolescence, communication with parents still plays an important role in adolescents' mood, developing emotion regulation, and socioemotional outcomes (Paikoff and Brooks-Gunn 1991; Weinstein et al. 2006). Given that adolescents are more able to regulate emotions independently, parental supportive responses to negative emotions decrease during this period, whereas their non-supportive responses increase (Allen and Sheeber 2008; Klimes-Dougan et al. 2007; Lougheed, Hollenstein, and Lewis 2016). Yet despite this normative decrease in parental support, parents' supportive regulatory responses to adolescent emotions are associated with lower risk of psychosocial difficulties

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(Lougheed et al. 2016), whereas greater parental invalidation of adolescent emotions is associated with greater adolescent expression of anger as well as greater defiance (Crowell et al. 2013).

3.4 Summary

Across development, parents use increasingly verbal strategies to respond to, regulate, and discuss child emotions. Moreover, their verbal strategies can become more sophisticated as children's verbal and social cognitive abilities emerge, shifting from labeling and teaching about emotions to discussing and problem-solving together with youth about their emotional experiences. Parents increasingly encourage children's independent regulation of emotions, and increasingly discourage children's negative emotion expression. Nonetheless, parents' supportive responses to child emotion seem to support children's development of emotional and communicative competence.

4 Parents' emotional communication

Parents' expression of emotion, whether spontaneous or strategic, serves important communicative, socialization, and regulatory functions. In early childhood, for example, parents' speech towards young children conveys more emotion than speech towards adults (Kitamura and Burnham 2003; Spinelli, Fasolo, and Mesman 2017; Trainor, Austin, and Desjardins 2000). Before infants and toddlers have receptive or expressive language skills, they understand nonverbal cues that signal approval or disapproval, and they often reference their parents' emotions to guide their actions (Fernald 1993; Repacholi 2009). These experiences contribute to children's internalization of cultural standards and their development of self-regulation during early childhood (Barrett and Nelson-Goens 1997; Fernald 1993; Kochanska and Thompson 1997). Although an extensive body of research has examined links between parent emotion expression and child outcomes, we highlight two research areas: the role of parental emotion expression in child language development, and the role of parental emotion expression in emotion socialization practices.

4.1 Parents' emotion expression and child language development

One line of research that considers the role of parent emotion in child development is the study of infant-directed speech. Infant-directed speech has unique prosodic features, including emotional features, compared to adult-directed speech. First, infant-directed speech conveys more positive emotion than adult-directed speech (Kitamura and Burnham 2003; Singh, Morgan, and Best 2002; Spinelli et al. 2017; Trainor et al. 2000). Infants have a preference for infant-directed speech, which appears to be driven by a preference for speech with positive emotional prosody (Singh et al. 2002). The positive prosodic cues in infant-directed speech support language development by enhancing infant attention and

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arousal and by eliciting infant vocalizations and responsiveness (Saint-Georges et al. 2013; Spinelli et al. 2017). Second, the prosodic features of infant-directed speech have higher affective variability (Kitamura and Burnham 2003; Spinelli et al. 2017; Trainor et al. 2000). The affective variability and exaggerated tones in infant-directed speech may increase the salience of language input, can serve as an "attentional spotlight" for important words, and aid speech segmentation and associative learning. In contrast, language input communicated in a flat tone of voice impairs infant word-learning (Golinkoff et al. 2015; Saint-Georges et al. 2013; Singh 2008; Spinelli et al. 2017).

The study of infant-directed speech in depressed parents has further highlighted the important role of parent emotion expression for child language development. Depressed parents convey less emotion in their speech towards their infants and use less exaggerated tones (Herrera, Reissland, and Shepherd 2004; Kaplan et al. 2001; Kaplan, Sliter, and Burgess 2007; Porritt et al. 2014). This reduced variability in speech tone results in reduced perceptual salience of speech, interferes with infant associative learning, and is associated with poorer infant vocabulary development (Kaplan et al. 2002; Kaplan et al. 2009; Porritt et al. 2014). Interestingly, infants of depressed parents not only have difficulty learning from their own parents' speech, but also from the infant-directed speech of unfamiliar adults; infants of depressed mothers appear to "tune out" the infant-directed speech of unfamiliar, non-depressed adult females (Kaplan, Dungan, and Zinser 2004). However, exposure to a non-depressed parent's speech may mitigate some of the negative effects on infant language learning (Kaplan, Danko, and Diaz 2010).

Thus, overall, parents' expression of emotions in their speech plays an important role in early language development. Although the extent to which parents' vary their tone and convey emotions in their voice is known to change across the first year of life (Herrera et al. 2004; Kitamura and Burnham 2003), normative changes in prosodic qualities of parents' speech and their impact on child language development are understudied beyond infancy. One known study examines the prosodic or emotional qualities of speech towards older children, in a Mandarin Chinese-speaking sample. The study finds that, by child-age five, parents use less pitch fluctuation in child-directed speech compared to infant-directed speech, although parents continue to speak in a higher pitch and use greater pitch fluctuation in child-directed speech compared to adult-directed speech (Liu, Tsao, and Kuhl 2009). These findings suggest that parents' adjust their expression of emotions in speech based on their child's developmental level and linguistic abilities. However, it is unknown what role parents' emotions play in influencing child language development beyond infancy.

4.2 Parents' emotion expression and emotion socialization

Though nonverbal emotional messages are embedded in emotion socialization practices, studies rarely attempt to disentangle them from other parenting behaviors, e.g., their verbal socialization or regulation strategies. Most studies focus on *what* parents say to their children and less on *how* they say it (Laible and Thompson 2000). We outline three important ways that parental emotion expressions may contribute to emotion socialization and therefore warrant empirical attention.

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First, parental emotion expressions may support young children's engagement with and comprehension of discussions about emotions or emotional experiences. Positive emotional cues in the voice elicit and enhance young children's attention and maintain parent-child interactions, although this has been primarily examined in the first year of life and in relation to language outcomes (Saint-Georges et al. 2013; Spinelli et al. 2017). Two studies of parent-child conversations during the preschool period suggest that discussions about prior emotional events characterized by shared positivity support young children's acquisition of emotion understanding and their ability to use their understanding to regulate their own behavior (Laible and Song 2006; Laible and Thompson 2000). Further, parents often exaggerate emotional cues as they label emotions, using tones of voice that also distinguish word meaning (e.g., happy versus sad; Herold, Nygaard, and Namy 2012). This preliminary evidence suggests that parents' nonverbal emotional cues, like tone of voice or facial expression, may help children maintain attention and aid comprehension during emotion socialization practices.

In addition, during discussion of past emotional experiences, parents' nonverbal emotion may help recreate children's emotional experiences in ways that help children better manage their emotions. Theoretically, as parents use language to help children remember and process past negative events (Fivush 1993; Laible 2011), their nonverbal emotion expression may help children re-experience negative emotion at a more manageable intensity, giving children the opportunity to engage in discussions about these emotions and to practice regulating them. Indeed, conversations about past emotional experiences in healthy parent-adolescent dyads often entail expressions of negative emotion without necessarily leading to a problematic negative interaction (Lougheed and Hollenstein 2016; van der Giessen et al. 2015). Thus, it may not be solely the words parents and children use, but also the tone of voice and facial expressions of emotion that contribute to children's socioemotional development.

Finally, parents experience and express their own emotions *during* children's emotional events. Angry or distressed reactions to children's negative emotions may maintain or exacerbate children's negative emotions, and are associated with the development of poor emotion regulation and behavior problems (Cole, Teti, and Zahn-Waxler 2003; Crowell et al. 2013; Eisenberg et al. 1998). Parent emotional responses mismatched to children's emotional experiences (e.g., positive responses to children's distress or hostility, or angry responses to children's positive emotions), are also associated with emotional and behavior problems (Cole et al. 2003; Granic and Lamey 2002). These responses may invalidate children's emotional experiences and disrupt their development of emotion understanding and regulation. Importantly, parents' negative emotional responses are not always problematic; parents in healthy parent-child dyads respond to child emotion by de-escalating the negative communication, responding to children's negative emotion with a lower level of negativity, though parents may continue to convey low levels of frustration (Cole et al. 2003; Granic and Lamey 2002). Thus, numerous studies have examined parents' emotional responses to children's emotions, though few have coupled measurement of parent emotion with measurement of their verbal socialization strategies. Yet the emotions parents express likely moderate the effect of their verbal strategies on children's emotions, and vice-versa. For example, parents' positive emotion expression may aid in parents' attempts to use

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distraction. Moreover, explanation or problem-solving strategies may be less effective in downregulating children's negative emotion if the parent conveys the message with a harsh tone of voice. More research is needed to understand the range of optimal parental verbal and emotional responses in terms of their valence, intensity, and content, compared to responses that exacerbate children's arousal, and interfere with their development of emotion understanding and self-regulation.

4.3 Summary

In sum, parents' own emotional expressions contribute both to children's language development and to their emotional development. In the first year of life, emotion conveyed in parents' speech helps to elicit infant attention, increase salience of language input, and support language-learning. Much like the role of parents' positive emotion expression in child language development, parents' positive emotion expressions may also enhance children's engagement in conversations about emotional experiences. In addition, parents' emotional expressions, positive or negative, may aid children's understanding of emotion terms, may help recreate emotional experiences at more manageable levels, and may moderate the effectiveness of verbal regulation strategies in modulating children's emotions in the moment. These hypotheses require more direct empirical observation. Importantly, this line of research should also incorporate measurement of parents' own beliefs about emotions (Gottman et al. 1996) and their ability to manage their own emotions (Dix 1991), each of which are known to influence parents' emotions and emotion socialization practices.

5 Summary and directions for future research

We have summarized developmental changes in children and parents' communication with and about emotion and have noted gaps in our knowledge about these processes. In particular, few studies integrate the study of verbal and emotional communication within the family. How emotions influence and are influenced by family verbal communication, or how verbal content and emotional messages intersect within socialization practices to influence child emotional and communicative development, are still open questions.

To address these gaps, we advocate for observational research that measures emotion expression and verbal behavior, in both children and parents, in the moment and over time. Social communication can be understood as moment-to-moment, bidirectional exchanges of emotional and verbal expression (Butler 2011); yet many studies of family emotional or verbal communication use static measures such as global ratings, self-report, or frequency counts of emotion expression or verbal strategies. Use of more continuous measurement and dynamic approaches, including examining sequences of emotions and verbal behaviors within an individual and across partners, is an important direction for research on family communication (Butler 2011; Granic, Dishion, and Hollenstein 2003). Moreover, longitudinal studies that examine moment-to-moment communication processes at multiple points would further elucidate how family communication with and about emotion

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develops, as well as how it shapes development. This type of approach, called multiple time-scale design or intensive longitudinal design (Ram and Diehl 2015), may help illustrate developmental changes in the nature and pattern of family emotional and verbal communication, and would help identify both the proximal effects and the long-term developmental outcomes of these communication processes. We illustrate with examples of how such approaches might be applied in the study of parent responses to child emotions in the proceeding paragraph.

Surprisingly few have studied the proximal influences of parents' emotional and verbal reactions to child emotions on subsequent changes in children's emotional arousal. Considering dynamic sequences of communicative behaviors can help researchers demonstrate, rather than assume, the effectiveness of certain regulatory or socialization strategies. Two studies employing such approaches have found, for example, that parents' use of verbal reassurance is effective in *preventing* child distress; however, comforting or reassurance is ineffective in decreasing emotional intensity if the child is already distressed when parents initiate this strategy, and may maintain or even exacerbate negative emotion (Martin et al. 2013; Morris et al. 2011). Instead, attention refocusing, or engaging the child in cognitive reframing, seemed to be most effective in reducing negative emotional intensity (Morris et al. 2011). These findings would be further enhanced by incorporating measurement of parents' emotions in addition to their verbal behaviors; perhaps reassurance is only effective if communicated in a calm, non-distressed manner, or perhaps parents' positive emotion is critical for engaging children in strategies such as attention refocusing or cognitive reframing. Moreover, longitudinal extensions of these studies would help identify developmental changes in effectiveness of certain strategies, and identify strategies that not only regulate child emotion in the moment, but also support the development of better emotion regulation over time.

Another important consideration in the study of family communication is the context in which it is observed and measured. Many of the studies that we reviewed used brief, semi-structured laboratory tasks to observe emotional and verbal communication within mother-child dyads. However, these controlled interactions may not closely resemble the everyday experiences of families; during these structured tasks, parents provide more language input and are more responsive to children's emotional and verbal cues, compared to during interactions observed in naturalistic contexts (Crockenberg and Leerkes 2003; Tamis-LeMonda et al. 2017). It is important, however, to understand how emotions emerge in the context of everyday family life (Bai and Repetti 2015). For example, negative emotions are often elicited in the context of mundane, everyday routines (Fiese 2006; Karraker et al. 1994; Sears et al. 2014). How families communicate, discuss, and regulate emotions in the context of everyday communication is an understudied question. Relatedly, we have focused almost exclusively on studies examining parent-child, usually mother-child, interactions. Yet it is important to consider family-level dynamics, which may differ dramatically from dyadic parent-child interactions (McHale and Fivaz-Depeursinge 2015; Repetti, Flook, and Sperling 2011). A few studies of emotion socialization or emotional communication have observed triadic interactions, in which both parents were present (Hollenstein, Allen, and Sheeber 2016; Lunkenheimer et al. 2007), or have examined communication and socialization in the presence of siblings (Blandon 2015; Brown and Dunn 1992). However,

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further research is needed to better understand whole-family communication processes. Moreover, the majority of studies we have cited include predominantly Western, English-speaking samples; culture represents a broader context in which emotional and verbal communication patterns are embedded and warrants further empirical attention.

We have identified several directions for research, including longitudinal, dynamic observations of both emotion and speech, conducted in naturalistic contexts and incorporating the whole family system. No single study is likely to address all of these recommendations, which require substantial time and resources. However, recent innovations in recording technology and automated processing may help make these approaches more feasible. Ambulatory recording technologies, such as Electronically Activated Recorder (Mehl et al. 2001) or Language Environment Analysis (Xu, Yapanel, and Gray 2009) allow families' communication to be sampled unobtrusively as they go about their daily lives. Moreover, automated processing of audio or video data can facilitate dynamic analyses of real-time interactions by greatly reducing time required to code communication (Messinger et al. 2014). Coupling ambulatory assessment and automated processing with more traditional methods would facilitate the study of family emotional and verbal communication.

6 Conclusions

Emotions are not just a backdrop to family communication; they are woven and infused within everyday verbal interactions. They serve important communicative functions, and are essential in socialization practices. Family communication with and about emotion changes across, and shapes, child development. Future research should consider continuous, dynamic measurement of family communication that captures the interwoven and interacting nature of family emotional and verbal communication in the moment and over time.

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46 Communication and emotions in conversations within children's close relationships

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Abstract: Conversations about emotions and other internal states reveal a great deal about an individual's understanding of their social world. Following from relationships theory, close and intimate relationships (e.g., parent-child, sibling, friendships) are considered important contexts for the development of social understanding. As such, we employ relationships theory as the framework for a discussion of the pertinent literature on conversations and emotions. In particular, we focus on the use of *internal state language* (e.g., references to emotions, cognitions, and intentions) during naturalistic, ongoing conversations that occur during family and peer exchanges such as play and conflict. Internal state language plays a critical role in how individuals communicate in the context of their close relationships and is also associated with the emotional tone and quality of these relationships. We also examine the role of different partners (i.e., mothers, siblings, and friends) and how their communication is associated with development and social understanding. Given that close relationships do not exist and develop in isolation, we consider how relationships may change and how one relationship may influence others. We examine how communication might be investigated during more complex family relationship dynamics over the course of development by posing questions for future research.

1 Introduction

When the first author's daughter was two and a half years old, they spontaneously announced at the dinner table that "Broccoli makes my feelings feel good". This anecdote highlights that the family is the first context in which young children learn to use *internal*

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state language during conversations, specifically references to emotions, cognitions, intentions, and preferences (also referred to as *mental state language*, *language of mind*, and *metacognitive language*; see de Rosnay and Hughes 2018). Use of such language in the context of conversations with close family members provides a window into an individual's understanding of their social world. In fact, internal state language is considered to be a marker of children's social cognitive development because it affords insight into how they consider their own and others' internal states, a crucial aspect of social understanding (Carpendale and Lewis 2015). We discuss relationships theory as the conceptual framework for how parents, siblings, and children's friends employ internal state language during ongoing, naturalistic conversations, discuss the connections between close and intimate family relationships, and provide future research questions.

2 Relationships as a context for learning and development

Developmental and social-constructivist theorists argue that close and intimate relationships with significant others such as parents, siblings, and friends provide the context for individuals' social, emotional, language, and cognitive development (Carpendale and Lewis 2015; Dunn 2015; Hartup 1989; Hinde 1979; Vygotsky 1978). Within the context of these close relationships, children construct their knowledge of the social world (e.g., social understanding) as they learn to understand others' perspectives and to express their emotions, intentions, goals, and beliefs during play, conflict, teaching, and other contexts. Hinde (1979) argued that two types of interactions define relationships, namely reciprocal and complementary exchanges. Reciprocal interactions are defined by equal, mutually returned exchanges between siblings and friends as seen in play and conflict. Whereas complementary interactions are hierarchical and defined by unequal power and knowledge as evident in parent-child relationships. Sibling relationships are uniquely characterized by both reciprocal (e.g., play) and complementary (e.g., teacher-learner) interactions, the latter due to age, knowledge, and birth differences between children.

The long, intimate, and co-constructed history of talk and interaction between parents and children provides the context for the development of social understanding, which includes the communication of one's thoughts and feelings (Howe et al. 2022; Tompkins et al. 2018). Via conversational discourse that includes internal state language, individuals are afforded opportunities to explain and predict their own and others' behavior, which enables them to participate in meaningful exchanges (Tompkins et al. 2018). The ability to understand and use internal state language develops in early childhood and into middle childhood (Hughes, Leece, and Wilson 2007). Specifically, children demonstrate this ability during interaction with significant relationship partners as they learn to navigate their complex social and cultural worlds (Carpendale and Lewis 2015; Leach, Howe, and DeHart 2017).

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3 Markers of children's developing social understanding

Social understanding is a multifaceted construct, characterized by multiple concepts that develop over time. Therefore, numerous measures are used to tap different aspects of social understanding across development (see Sharp, Fonagy, and Goodyer 2008). Children's understanding of mistaken beliefs, or *false beliefs,* is among the most intensively studied attainments within the social understanding literature (Wellman, Cross, and Watson 2001). False belief tasks assess children's ability to understand that beliefs may be changeable, fallible, and contradictory to their own; an essential skill in predicting, interpreting, and manipulating others' behavior in social situations. For preschoolers, a typical story in a false belief task concerns a protagonist who places an object in a specific location, only to have it moved by another character to a second location in their absence. After the story, children are asked questions to ascertain whether they have a representation of a mistaken belief in their attribution of the protagonist's belief, or their prediction of the protagonist's behavior (Wellman et al. 2001). *Emotion understanding* is also an important marker of children's developing social understanding. Denham's (1986) widely used emotion understanding task assesses children's ability to recognize emotions by labelling pictures (depicting *happy, sad, cross, scared*). Children are read short vignettes about a protagonist, following which they are asked to identify how the protagonist would feel in each situation. Together, children's ability to recognize and take the perspective of others' emotions demonstrates their insight into the causes and content of others' feelings, an essential ability when navigating social situations (Blair 2003).

4 Parent-child interactions

Children's conversations with their parents are a rich context for the development of social understanding. Although some work explores features of fathers' speech (La Bounty et al. 2008), most studies focus on mothers' speech during interactions with their children, namely, conversations about, and sensitivity to, internal states (Tompkins et al. 2018). Recent meta-analyses indicate mothers' internal state references are associated with children's performance on false belief and emotion understanding tasks (Devine and Hughes 2016; Tompkins et al. 2018) and other markers of children's social understanding, such as children's own use of internal state language (Jenkins et al. 2003). While investigations predominantly focus on maternal frequency of references to emotions, desires, and cognitions (de Rosnay and Hughes 2006), conversations about cognitions (e.g., *think*, *know*, *believe*) emerge as the best predictor of children's belief and emotion understanding (Tompkins et al. 2018).

The influence of mothers' conversational references to cognitions on children's belief and emotion understanding is explained by different theoretical perspectives. Mothers' references to thoughts and knowledge may encourage children to attend to, reflect on, and represent abstract concepts. By drawing attention to thought processes, mothers' speech

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about cognitions may scaffold children to overcome the saliency of reality and understand the discrepancies between their own experience of reality and the reality experienced by others (Adrian et al. 2005). This perspective is corroborated by studies demonstrating differences in social understanding between deaf children in hearing families versus native signers. Profoundly deaf children from hearing families (who are therefore belatedly signing) consistently perform more poorly on false belief tasks than native signing children (Peterson and Siegal 1999). Hearing parents of deaf children, even if they learn to sign, have difficulties conversing about topics that have no visual referent, resulting in less frequent and less rich conversations regarding abstract topics, such as non-present objects, events, memories, future events, and notably, inner states (Morford and Goldin-Meadow 1997).

Conversations about cognitive states between mothers and their children may provide children with opportunities to appreciate others' perspectives. Mothers' comments about inner states may add to this "constant tutorial" (Harris 1999: 102) in children's understanding that conversations can move beyond current mutual activities and subjects of joint attention, to discussions of what is absent and unobservable (e.g., the partner's beliefs or knowledge). Indeed, in the early years, mothers' references to the *child's* internal states are associated with children's discussion of emotions and desires (Taumoepeau and Ruffman 2006). However, in middle childhood, mothers' references to *her own* cognitive states, and not the child's, fosters children's advanced understanding of beliefs and spontaneous talk about others' cognitions during free play (Paine et al. 2019); thus, exposure to different perspectives is important in developing a sophisticated understanding of internal states.

The linguistic account asserts that mothers' references to cognitive states expose children to *sentential complements*, which may foster children's ability to represent others' points of view (de Villiers and Pyers 2002). Understanding the relation between the mental state verb, "she thought" and the complement, "the world was flat" (de Villiers and Pyers 2002: 1038), may provide a linguistic representation of the contrast between a child's own and another's perspective. Indeed, children's social understanding is associated with their memory of sentential complements, with and without internal state language (de Villiers and Pyers 2002). However, a recent investigation showed mothers' speech that contrasts reality and thought – or *contrastives* – predicted children's social understanding over and above references to cognitive states or use of complement syntax. While contrastives occur within the context of complement syntax, the explicit highlighting of discrepancies between thought and reality may be most facilitative of children's developing understanding of minds (e.g., "The hippo thinks that Mr. Peek said that she's getting fat. But he's really talking about himself"; Tompkins 2015: 45).

While numerous studies demonstrate the importance of mothers' internal state language for children's understanding of minds, the strength of this association often varies; one moderator of mothers' internal state language is the context in which language is investigated. Mothers' spontaneous references to inner states are studied during naturalistic home observations and free play sessions, in addition to more controlled conditions such as shared wordless picture/book reading and reminiscing tasks (see Tompkins et al. 2018). Mothers' references to internal states during picture/book reading is one context producing the strongest associations with children's understanding of others' beliefs (Tompkins et al.

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2018). Maternal references to story characters' thoughts and feelings may be important in fostering children's understanding of minds because children are encouraged to access a *double perspective* (Adrian, Clemente, and Villanueva 2007) of the inner worlds of the characters in stories.

Beyond a simple tally of mothers' references to internal states, the quality of mothers' internal state language affects the extent to which this feature of speech fosters children's social understanding. For example, a mothers' proclivity to comment *appropriately* on the mind of her child, known as *mind-mindedness*, is theorized to represent the extent to which a mother is attuned to her child's emotions, intentions, and thoughts (Meins 1997). Another quality of mothers' internal state language is the tendency to elaborate on the causes and consequences of internal states (e.g., "He *remembers that he has not done the bedroom yet*" rather than "he *remembers*"; Slaughter, Peterson, and Mackintosh 2007: 843). Indeed, mothers' appropriate and elaborative references to internal states are better predictors of children's belief and emotion understanding than inappropriate references, or references without explanation (Tompkins et al. 2018). Additionally, the degree to which a mother's speech is semantically related to the child's previous conversational turn, known as *connectedness*, also moderates the relationship between mothers' references to cognitions and children's performance on false belief tasks (Ensor and Hughes 2008).

5 Child-child relationships

Siblings co-construct a long, shared history based on intimate knowledge of one another, which may be particularly beneficial for children's social and emotional understanding (Howe 1991; Howe et al. 2022; Paine et al. 2018). Children's close friendships are also characterized by intimacy and render opportunities to foster interpersonal communication and perspective-taking skills (Bukowski, Laursen, and Rubin 2018; Piaget 1962). While both sibling and friend relationships are intimate, dyadic, and important for development, they also have different defining features, thus offering unique contexts to facilitate children's social and emotional understanding (Hartup 1989). As noted, siblings encompass both reciprocal and complementary exchanges, whereas friendships are characterized by reciprocity and friends view one another, more or less, as equals (Hinde 1979). Friendships are based on mutual liking and similarity while sibling relationships are characterized by a greater range of affect (Bukowski et al. 2018; Dunn 2015; Howe et al. 2022). Perhaps friends' mutual liking is due to the voluntary nature of the relationship; children may choose their friends based on similar interests and abilities, unlike siblings whose relationship is obligatory. Within these two relationships, children engage in pretend play as well as conflict.

5.1 Pretend play and communication

Pretend play requires complex cognitive abilities because it requires children to disassociate reality from fantasy and entertain multiple hypothetical realities (Lillard 2002). When pretend play is social, it requires children to coordinate their perspectives and communi-

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cate effectively, thus making it an ideal context for social and emotional understanding (Lillard 2002). During pretense, children need to establish a shared understanding of the characters' roles, actions, thoughts, and feelings as well as express their own point of view and demonstrate an understanding of their partner's perspective, all of which requires children to reference various mental and emotional states (Howe 1991; Hughes and Dunn 1997; Leach et al. 2017). Howe, Petrakos, and Rinaldi (1998) observed that siblings who engaged in frequent pretend play used more internal state language than those who engaged in less pretense. Similarly, preschool-aged friends used more mental state terminology during pretend than non-pretend contexts (Hughes and Dunn 1997). Recently, Leach et al. (2017: 9) found children referenced cognitions and shared internal states (e.g., "*we* can *pretend* that's the pool!") more at age seven than four; they also made more cognition references with friends than siblings at age seven. Referencing others' internal states may be important for maintaining reciprocal interactions, such as social pretense, and may reflect children's underlying socio-cognitive competency (Hughes et al. 2007).

Overall, social pretend play provides opportunities for children to express emotions and thoughts in various enacted roles with their partner. Children acquire the vocabulary needed for labelling mental states, which, in turn, enables them to represent and reflect on abstract mental state terms (de Rosnay and Hughes 2006). Pretense is rich in internal state language and there may be an interdependence between such language and pretend play in developing children's understanding of mental life (Howe 1991; Hughes and Dunn 1997).

5.2 Conflict

Many children engage in frequent conflict with family members and friends, which offers children opportunities to reflect on their own and others' internal states (Dunn 1994; Howe 1991). Siblings talk about their own feeling states during conflict, such as, "... *you drive me mad!* I'm really *angry!* Leave me alone!" (Howe 1991: 1506), bringing attention to their own thoughts, feelings, and intentions within affectively charged situations. Often the source of children's conflict involves some contrast of inner states (often intentions or desires). One child's speech demonstrated this as their younger sibling attempted to knock down a tower of blocks, "Don't do that! *I want to make it higher.*" (Howe 1991: 1506). Such arguments afford children opportunities to acknowledge and discuss their contrasting points of view, and perhaps attempt to reconcile their differences. Children's use of *other-oriented arguments* (Dunn 1994) that consider the interactional partner's inner states, is associated with children's false belief understanding, for example, "She said we have to play together. Let's finish the building, then we'll play with that." (Foote and Holmes-Lonergan 2003: 58). Children who attempt to resolve conflict by focussing on their self-interest, or engaging in *self-oriented arguments* (Dunn 1994) such as, "I chose the horse first" (Foote and Holmes-Lonergan 2003: 57), score lower on false belief tasks (Foote and Holmes-Lonergan 2003).

The association between conflict and children's developing knowledge of the mind may differ according to relationship quality and their interlocutor (Cutting and Dunn 2006). Destructive sibling relationships, characterized by high emotional intensity, negative af-

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fect, aggression, and antagonism are associated with poor performance on measures of social understanding (Song et al. 2016). Similarly, child-child friendships characterized by high levels of aggression are associated with less constructive conflict resolutions (Howe and McWilliam 2006). Yet, a child who resolves conflict constructively with their friend does not necessarily resolve sibling quarrels in similarly positive ways (Cutting and Dunn 2006). Children's shared history, the quality, and emotional tone of the relationship is therefore likely to lead to differences in their motivation to resolve conflicts by discussing their feelings, beliefs and intentions.

6 Connections between close and intimate family relationships

Children's relationships do not exist in isolation, but are part of larger family dynamics. As such, children's developing understanding of minds may be fostered within the context of their experiences of family structural changes, by observing interactions between others, and involvement within triadic interactions. The transition to siblinghood is one normative family structure change that alters the nature of mother-child interactions (Dunn and Kendrick 1982). The arrival of a younger sibling provides new opportunities to discuss internal states with the mother, as the child navigates their new role within the family, as a brother or sister and as an older child. Take the following excerpt of a transcript between a mother and her firstborn daughter:

Child: (Looking at baby sibling's clothes) "I *want* one of those".
Mother: "Well, you *know* there aren't any babygros (clothes) for you. What are you doing with those?"
Child: "I'm a baby. I'm a baby. Another one for me. I *want*".
(Dunn and Kendrick 1982: 67)

Children also closely monitor conversations between their mother and sibling (Dunn and Kendrick 1982) and as such, overhear internal state language between others (Howe and Ross 1990; Jenkins et al. 2003). Prior to siblinghood, mother-child conversations focus predominantly on the child's internal states (Dunn and Kendrick 1982), yet overhearing mother-sibling conversations exposes children to conversations regarding *other* individuals' internal states. Indeed, following the birth of a younger sibling, the frequency of mothers' references to the inner states of others increases threefold; an increase reflecting mothers' discussions about the younger sibling's feelings, desires and intentions with firstborn child (Dunn and Kendrick 1982; Howe and Ross 1990).

Moreover, mothers' involvement in sibling conflict is a prime context for exposing children to internal state language, specifically as mothers attempt to manage sibling disputes. Mothers become involved in over half of sibling conflicts, and interventions often include references to rules and internal states (Dunn and Munn 1985), such as, "She didn't *know* I had promised it to you" (Dunn et al. 1991: 1363). Although maternal intervention is linked

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with longer sibling conflicts and more physical aggression, it is also associated with more mature conflict management by children (Dunn and Munn 1985).

7 Future directions and conclusions

The study of internal state language provides a deeper understanding of the nature of human interaction, but there are numerous unanswered questions. In this chapter, we focused on children's relationships with mothers, siblings, and friends, but few studies examine the influence of fathers' references to internal states on children's social understanding. In one exception, La Bounty et al. (2008) reported that mothers' and fathers' internal state language differentially predicted children's social understanding; mothers' causal explanations about emotions predicted children's emotion understanding, and fathers' causal explanations regarding desires predicted children's false belief performance. Apparently, fathers play an important role in fostering children's understanding of minds, and future research must determine the importance of the context of parental language (e.g., conflict vs. play), and fathers' use of internal state language beyond dyadic interactions. Another area calling for more research is the examination of friends' internal state language as a predictor of belief and emotion understanding. As Hughes (2011) argues, there are many studies in which measures of social competence with peers are investigated as an outcome of social understanding skills, but features of children's conversations with friends are rarely studied as a predictor of mind-understanding. Finally, little is known about children's use of internal state language within their close relationships in economically, ethnically, and culturally diverse populations, where there are possibly differential influences on social understanding.

Internal state language is one important means for individuals to learn to navigate their social worlds, make their own emotions and thoughts transparent, and to understand how others' minds may be alike or different to their own in a variety of positive and negative contexts. Clearly, family interactions afford opportunities to develop this understanding and to build the foundation for communication of internal state language that will be employed in many contexts beyond the family, such as with friends. It is important to communicate to others what is on one's mind and the source of one's beliefs, thoughts, and emotions, as was evident in the first author's daughter's claim that broccoli made their "feelings feel good".

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Ana Aznar and Harriet Tenenbaum

47 Gender construction in children's emotion expressions

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Abstract: Emotion expression helps others understand how one feels. The ability to express one's emotions appropriately is an important element of a healthy socio-emotional development because it facilitates the establishment of effective social relationships. However, it has been suggested that there are gender differences in children's emotion expression, which sometimes can create difficulties in social relationships. In this chapter, we present a comprehensive review of the literature on gender differences in children's expressions of emotions. Findings show that when gender differences are found, they tend to be small, showing girls expressing emotions more frequently than boys. However, we need to be cautious when interpreting these findings because gender differences tend to be mediated by contextual factors, such as age, interpersonal context, culture, language, or task valence, underscoring the relevance of contextual factors in gender differences. This chapter helps our understanding of how girls and boys express their emotions, which in turn might help us to get a better understanding of the underlying mechanisms behind girls' and boys' social relationships and how gender construction in emotion expression might develop through childhood and adolescence. Limitations of the existing literature and future directions for research on gender differences in children's emotion expression are suggested.

1 Introduction

Emotion expression is a key ability because it helps us to communicate our feelings to others. From childhood, there are gender differences in emotion expression (Chaplin and Aldao 2013). Gender is one of the most salient categories that shapes individuals and as such it is pervasive in human development (Fiorentini 2013). Indeed, many of the activities in which people are involved during their lives are defined by gender. Because of the great impact that gender has in individuals' lives, the study of gender has received great atten-

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tion and evolved greatly over the past few decades. Early researchers viewed gender as a stable trait, whereas more recently, gender is considered as an evolving component of one's identity (Wood and Eagly 2002). From this perspective, the focus of research on this field has shifted from aiming to describe the exact ways in which males and females differ, to trying to determine when, why, and how gender differences in human behaviour appear and develop. In the present chapter, we will review the existing literature on gender differences in children's emotion expression and we will explore the underlying reasons behind these differences.

2 Children's development of emotion competence

Emotions are complex physiological states that involve four main components: cognitive understanding, subjective feelings, behavioural responses, and physiological reactions (Adolphs 2017). As children age, they develop emotional competence, which is the ability to understand one's own and others' emotions, to express one's emotions, as well as to regulate one's emotions (Denham et al. 2003; Halberstadt, Denham, and Dunsmore 2001). Out of all three components, emotion expression is the one that has been most extensively examined, partly because it is the easiest to research (Kring and Gordon 1998). The other two components of emotion competence, emotion regulation and emotion understanding, are beyond the scope of this chapter, which is based on children's emotion expression, specifically on the development of gender differences in emotion expression.

Emotions are related to a variety of children's abilities and competences. First, emotional competence is intrinsically linked to children's social development (Eisenberg et al. 2004; McDowell and Parke 2005). Indeed, children who display high levels of emotional competence tend to be more popular amongst their peers and have more friends than children who are less emotionally competent (Fabes et al. 2001). The underlying reason behind this relationship might be that children who are more emotionally competent might be better able to understand and to appropriately react to what others are feeling than their less emotionally able counterparts. As a result, the former children are able to establish higher quality relationships with their peers.

Second, emotion competence is linked with academic performance (Trentacosta and Izard 2007; Valiente, Swanson, and Eisenberg 2012). Research shows that emotion knowledge at age 5 years predicts academic performance at age 9 years (Izard et al. 2001). Emotion regulation has also been linked to children's academic performance (Sanson, Hemphill, and Smart 2004). Specifically, emotion regulation has been found to be related to school readiness and academic competence because children who have difficulty controlling their emotions also have difficulty focusing their attention (Blair 2002).

Finally, emotion competence is linked with the development of psychopathologies. Children who are not as emotionally competent as their counterparts are at a higher risk of experiencing symptoms of depression, anxiety, and somatic complaints (Klemanski et al. 2017; Southam-Gerow and Kendall 2000). In sum, the ability to understand, express, and regulate one's own and others' emotions plays a key role in the ability to lead successful

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lives. This chapter will examine one aspect of emotion competence: emotional expression, and specifically gender differences of emotion expression.

3 Emotion expression

Emotion expression is the ability to express one's emotions appropriately and effectively so that others can understand how one feels (Denham et al. 2003). It is the extent to which individuals display the emotions they experience (Kring, Smith, and Neale 1994). Emotion expression can be communicated through a variety of channels, such as facial expressions (e.g., facial expression of sadness or anger), vocalizations (e.g., crying), postures (e.g., clenching of fists) or through emotion talk (e.g., discussing how one feels) (Chaplin 2015).

From birth, infants express emotions to guide parents' caregiving behaviours. As they grow, children learn to express verbally and nonverbally their feelings, and when and how to express those emotions, while at the same time they learn to respond to others' emotion expressions (Chaplin and Aldao 2013). It is important to develop the ability to successfully express one's emotions because research suggests that this ability is linked with the establishment of successful social relationships (Halberstadt et al. 2001). Indeed, pre-schoolers who mention more emotion words are better liked by their peers than those who mention fewer emotion words (Fabes et al. 2001). Also, children living in families who express positive affect frequently show frequent prosocial behaviour (Eisenberg, Spinrad, and Knafo-Noam 2015), whereas children in families who express negative affect are more likely to display high levels of aggression with peers (Denham, Renwick-DeBardi, and Hewes 1994). Finally, children who cannot express their emotions successfully are at a higher risk of suffering psychopathologies (Chaplin and Cole 2005). Thus, it is very important to establish how emotion expression is developed and acquired.

4 Developmental trend of emotion expression

From birth, infants use nonverbal cues to communicate their emotional state to their caregivers (Chaplin 2015). From the age of 18 months, children begin to communicate their emotions verbally, mainly through emotion words (e.g., "I am happy", "He is sad"). Children start by expressing simple emotions (e.g., sadness, happiness, fear, anger) and between the ages of 2 and 3, they learn to express complex emotions (e.g., guilt, pride, shame) (Barrett, Zahn-Waxler, and Cole 1993; Belsky, Domitrovich, and Crnic 1997). Much of this research comes from maternal reports which show that by age 28 months, children express positive terms such as happiness, amusement, affection, pride, surprise, moral conformity, and well-being. Mothers also report children at this age expressing negative terms, namely sadness, fear, anger, disgust, guilt, and negative feelings in general. With age, the complexity of children's verbal expression of emotions increases rapidly (Southam-Gerow and Kendall 2002). Specifically, between the ages of 18 and 36 months, children learn to label their own and others' emotions, to discuss past and future emotions, to talk about the

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antecedents and consequences of emotional states, and they improve their ability to discuss the behaviour correlates of emotions (Brethertone et al. 1986; Trabasso, Stein, and Johnson 1981). Later on, children start to express an understanding that emotional experiences can be controlled and that individuals do not always express their emotions (Bretherton et al. 1986).

Even though there is a clear developmental trend in children's expression of emotions, there are also individual differences in children's ability to express their emotions from a very young age (Brown and Dunn 1996; Denham 1998; Miller and Olson 2000). Factors that may explain how these individual differences appear have been examined. One such factor is children's conversations about emotions with those around them (e.g., parents, siblings, peers). Another factor may stem from gender, and specifically from the different ways in which mothers and fathers talk about emotions to their daughters and sons (Adams et al. 1995; Cervantes and Callanan 1998; Kuebli and Fivush 1992; Kuebli, Butler, and Fivush 1995; Martin and Green 2005).

5 Gender differences in emotion expression: literature review

Think of the most emotional person you know. Most people think of a woman. Popular culture in the West traditionally holds the stereotype that women are more emotional than men (Fivush and Buckner 2000). This stereotype is directly linked with the notion that men are rational while women are emotional, a notion that arises from the binary distinction that exists in the West between reason and emotion being directly linked to masculinity and femininity, respectively (Lloyd 2002). Importantly, the association of women with emotionality and men with rationality places men at a higher status than women. If people believe that men are better able to think and act more rationally than women, and women are more likely dominated by their emotions than men, men are placed at a higher status. Indeed, throughout the world most of the roles that are associated with men are of higher status than those associated with women. For example, men tend to be considered the main breadwinner in many households, whereas women tend to be the caregivers (Huerta et al. 2013). Therefore, it is vital that we determine if the popular assumption that females are more emotional than men is accurate. Throughout the next paragraphs, we will explore the research literature on gender differences in children's emotional expression, so that we can determine if the popular stereotype is supported by the scientific literature or not.

In general, research suggests that there are gender differences in children's emotion expression and when differences are found, girls tend to be more emotionally expressive than boys. However, it is important to note that when gender differences are found, they tend to be small (Chaplin and Aldao 2013), but at the same time, they tend to be found regardless of the method of measurement. The most frequent methods used to examine children's emotion expressions are parents' and children's self-reports (e.g., Katz et al. 2014), observations (e.g., Bai, Repetti, and Sperling 2016), coding of explicit emotion talk between parents and children (e.g., Aznar and Tenenbaum 2015) or between peers (e.g.,

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Tenenbaum, Ford, and Alkhedairy 2011), and children's individual testing by a researcher (e.g., Aldrich et al. 2011).

Similarly, in adult samples, women are found to be more expressive than men, even when using different methods of measurement, such as self-reports (e.g., Kring, Smith, and Neale 1994), ratings of communication accuracy (e.g., Wagner, MacDonald, and Mastead 1986), and facial electromyography (EMG) measures (facial EMG measures muscle activity and it is used to measure facial expressions of emotions [e.g., Lang et al. 1993]). Importantly, there are some exceptions where no gender differences have been found in adults' emotion expression (e.g., Vrana 1993) but to the best of our knowledge no study has found that men are more emotionally expressive than women.

These different methods of measurement are used to examine both nonverbal and verbal emotion expression during childhood and adulthood. Even though the study of nonverbal expressions of emotions is beyond the scope of this chapter, we would like to bring to the reader's attention the fact that gender differences have also been found when children and adults express their emotions nonverbally. Indeed, gender differences in smiling and crying have been found. Starting at age 11 (Van Tilburg, Unterberg, and Vingerhoets 2002), and continuing through adolescence and adulthood (Bekker and Vingerhoets 2001; Lombardo, Cretser, and Roesch 2001; Vingerhoets and Scheirs 2000), girls and women report crying more frequently than their male counterparts. Similarly, when looking at gender differences in smiling behaviour, starting at age 11, girls were found to smile more than same-age boys and this gender difference continues to appear in a series of meta-analyses with adult samples, suggesting that women tend to smile more frequently than men (Hall, Carter, and Horgan 2000; LaFrance and Hecht 2000; LaFrance, Hecht, and Paluck 2003; Wondergem and Friedlmeier 2012). However, both crying and smiling behaviours seem to be affected by contextual factors. For example, women report crying more frequently when in the presence of familiar others (Lombardo, Cretser, and Roesch 2001), whereas men report doing so when alone. In the case of smiling, women have been found to smile more than men when aware of being observed by others (LaFrance, Hecht, and Paluck 2003). In sum, in a similar fashion to research on verbal expression of emotions, research examining gender differences in nonverbal behaviours, such as crying and smiling behaviours, supports the cultural stereotype of women being more emotional than men. This difference seems to appear in childhood.

Gender differences have also been examined in children's verbal expressions of emotions. Much of this research has explored gender differences in children's emotion talk when in conversations with their mothers. These studies have examined mother-child emotion talk during reminiscence (talk about past events [Fivush and Vasudeva 2002; Fivush et al. 2009; Fivush and Zaman 2013]), play-related storytelling tasks (Aznar and Tenenbaum 2013; Cervantes 2002), and book-reading tasks (Garrett-Peters et al. 2008; Jessee, McElwain, and Booth-LaForce 2016; Van der Pol et al. 2015). Across these different tasks, researchers have mostly examined the frequency of parent-child emotion talk (e.g., how many times a child mentions an emotion word while completing a set task), the elaboration of parent-child emotion talk (e.g., whether the child explains or not the emotion terms he or she mentions when talking to his or her mother), or the valence of emotion talk (e.g., whether the child refers to negative or positive emotions). To a lesser extent, researchers

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have also examined gender differences in children's emotion talk when in conversation with their peers (Tenenbaum, Ford, and Alkhedairy 2011).

In addition to examining gender differences in general verbal emotion expression, gender differences in the use of specific emotions words have also been studied. Traditionally, specific emotions have been stereotyped as being female-appropriate or male-appropriate. For example, happiness, fear, and sadness are considered to be feminine-stereotyped emotions, whereas anger, pride, and frustration are thought to be masculine-stereotyped emotions (Brescoll and Uhlmann 2008; Kring 2000; Tiedens, Ellsworth, and Mesquita 2000; Weber and Wiedig-Allison 2007). If we consider anger as a self-assertive emotion and sadness as a passive emotion (Leaper 2002), we can conclude that stereotypes about specific emotions are consistent with more general gender stereotypes. The question then is whether gender stereotypes about specific emotions are supported by scientific research.

Research examining gender differences in emotion expression is not conclusive in determining whether these differences are present across all emotions. Studies with adults suggest that, in general, women have been found to express sadness, happiness, and fear more frequently, whereas men tend to express anger and pride more frequently (Hess, Blairy, and Kleck 2000; Kring 2000; Plant et al. 2007). Indeed, when asked to report their emotion expression, women report expressing more sadness than men and, in contrast, men report expressing more anger than women (Hess, Blairy, and Kleck 2000). These findings are consistent with the Western stereotype of emotion expression because if men express sadness frequently, it could be an indicator of weakness, which in turn could damage status (Oransky and Marecek 2009; Pascoe 2007). In contrast, Van der Pol et al. (2015) found no gender differences in mothers' and fathers' conversation with their children about sadness, happiness, anger, and fear.

Gender differences in the expression of specific emotions across children's development have also been examined. Starting with children in middle childhood and adolescents (Brody and Hall 2000), girls report expressing more sadness than do boys, and even they report feeling worse if they do not express their negative emotions than if they do (Zeman and Shipman 1997). In contrast, boys tend to express anger more frequently than do girls (O'Kearney and Dadds 2004). In a recent meta-analysis of 166 studies examining gender differences in 0- to 17-year-old children's verbal and nonverbal expressions of emotion, Chaplin and Aldao (2013) found very small but significant gender differences, with boys expressing more anger than girls and girls expressing more positive emotions and more sadness and anxiety than do boys. Notably, the emotion with the largest gender difference effect size was shame, with girls expressing more shame than boys. In sum, it seems that there are gender differences in children's and adults' expression of specific emotions and that these differences tend to mirror more general gender stereotypes.

However, we need to be cautious when claiming that women and girls are more emotionally expressive than men and boys because of two main reasons. First, how men and women or boys and girls express their emotions depends on the channel (e.g., verbal, facial expressions, nonverbal behaviour) through which the emotions are expressed (Brody 1999). Second, emotion expression tends to be mediated by several social, cultural, and situational factors (Chaplin and Aldao 2013; Fischer and Evers 2011; Fischer and LaFrance 2015); namely, the specific emotion being expressed, the conversational partner, and the speak-

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er's personal characteristics such as age, language, or culture (Chaplin and Aldao 2013; Okur and Corapci 2016). As we will examine throughout the next paragraphs, these factors are likely to play a role in explaining the underlying mechanisms behind gender differences in emotion expression. Importantly, there are other contextual factors such as ethnicity (for an exception, see Brown, Craig, and Halberstadt 2015) or socioeconomic status (for an exception, see Okur and Corapci [2016]) that have not yet received much attention.

5.1 Age

Age is one of the contextual factors that has been found to influence gender differences in children's emotion expression (Chaplin 2015; Chaplin and Aldao 2013; Simon and Nath 2004). Research with adults consistently show that although the magnitude of the differences is small, both verbally and nonverbally, women are more emotional than men (Chaplin 2015; Kring and Gordon 1998). Even more, women tend to show more positive emotions and internalizing emotions such as sadness than men. Specifically, women tend to smile more (DeSantis, Mohan, and Steinhorst 2005) and, except for anger, they tend to express more negative emotions than men (Else-Quest et al. 2012). Women also report being more emotionally expressive than men (Bronstein et al. 1996). Similarly, Goldsmith and Weller (2001) found that across 11 samples and using a variety of data collection (observations, hidden observations, interview, and content analysis), women used more emotion words than men. In contrast, men tend to show more anger and aggression than women (Chaplin 2015). However, a few studies have found no gender differences in emotion expression amongst adults (e.g., Kring and Gordon 1998; Lanzetta, Cartwright-Smith, and Kleck 1976). Considering these findings, the question we should ask is: When do these gender differences in emotion expression appear? Do boys and girls express emotions differently from birth or do these differences appear as children develop?

Studies examining gender differences in emotion expression with infants and children are inconsistent, making it difficult to establish a clear developmental pattern of gender differences in emotion expression (Cossette et al. 1996). Starting in infancy, the majority of observational studies do not find gender differences in new-borns and older infants in natural or experimental settings (for a review, see Cossette et al. 1996). When differences have been found, infant boys are reported as being more irritable (with Spanish infants [Boatella-Costa et al. 2007]), crying for longer (Feldman, Brody, and Miller 1980), and being more emotionally expressive than infant girls.

In preschool children, more gender differences in emotion expression have been reported (Chaplin, Cole, and Zahn-Waxler 2005). When differences have been found, girls tend to be more expressive than boys. During naturalistic observations in the preschool years, preschool girls and boys used a similar amount of emotion words (Fabes et al. 2001). However, by the end of the preschool years, girls used more emotion words and a greater type than did boys, even after controlling for total amount of talk (Kuebli, Butler, and Fivush 1995). At 24 months of age, girls have been found to talk more about emotions than boys when in conversations with their mothers (Cervantes and Callanan 1998; Dunn, Bretherton, and Munn 1987). Similarly, while playing with their peers in a conflict situation,

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4- and 5-year-old girls were observed to express more emotions than same-age boys (Garner, Robertson, and Smith 1997). Finally, 6-year-old girls were found to use more emotion words than same-age boys when in conversation with their peers (Tenenbaum, Ford, and Alkhedairy 2011).

In addition to examining the frequency of preschool children's emotion talk, research has also examined the quality and the style of this type of talk. Forty to 45-month-old children have been found to talk more about causes of events with their mothers than with their fathers, and girls used more emotion words when talking about scary events with their parents than did boys (Fivush et al. 2000). Leaper and Smith (2004) found that across ages, girls used more affiliative language than did boys, whereas boys used more assertive language than did girls. Similarly, Leaper (1991) found that 5-year-old dyads were more likely to follow gender-typed patterns when asked to play with puppets than those in dyads aged 7 years. Finally, girls were more likely to show sadness than boys, whereas boys tended to show more anger than girls (Panjwani et al. 2016).

Research with adolescents, although much scarcer than that with school-aged children, continues to show gender differences in emotion expression. When examining the frequency of emotion words in conversation with their parents, adolescent girls have been found to mention more emotion words than same-age adolescent boys (Aldrich and Tenenbaum 2006). Regarding the quality of emotion talk, female adolescents report expressing more sadness and affection than do same-age boys (Safyer and Hauser 1994). In contrast, male adolescents express anger more frequently than do girls (Brody and Hall 1993).

Thus, consistent with cultural stereotypes, girls tend to be more emotionally expressive than boys, beginning during the preschool years and continuing into adolescence and across adulthood. However, what remains unclear is whether girls and women are more emotionally expressive than boys and men, or whether girls and women experience their emotions more strongly than do men, and what could explain gender differences in emotion expression (Kring and Gordon 1998). Some research suggests that women may be more emotionally expressive than men because they experience emotions more intensely (with German participants [Gong, Wong, and Wang 2018]). However, the relation between emotion expression and emotion experience still remains unclear, partly because it may depend on the specific type of emotion experienced (Deng et al. 2016). What appears to be the case is that during childhood, boys and girls learn different rules of emotion expression, but they do not learn different rules for emotion experience (Brody 1985), suggesting that emotion expression is more heavily socialized than the experience of emotion. In sum, these findings indicate that gender differences in emotion expression seem to increase with age and that both verbally and nonverbally, women and girls are more emotionally expressive than men and boys, but that women and girls do not experience emotions more intensely than men and boys.

5.2 Interlocutor

When communicating our emotions, common sense suggests that the interlocutor may influence how much or how little one chooses to disclose and/or talk about emotions. For

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example, one might express emotions more freely when alone (e.g., crying, screaming) than when in the presence of someone else. Similarly, one can also expect to feel more comfortable communicating one's emotions to a very close friend than to someone with whom one might not be as close.

In general, individuals tend to express their emotions more frequently with their family members than with strangers, colleagues at work, or acquaintances (Matsumoto et al. 1998). Specifically, research shows that positive emotions are more freely expressed in the presence of familiar others than when with unfamiliar others (Kring, Raniere, and Eberhardt 1995), whereas negative emotions tend to be inhibited when in the presence of unfamiliar others but not when with familiar others (Chaplin and Aldao 2013). Indeed, different patterns of emotion expression appear, when comparing children in conversations with their parents and their peers. For example, 7- and 11-year-old children were more likely to express negative emotions with parents than with peers, probably because parents are expected to be more accepting of their children's expression of emotions than are peers (Zeman and Garber 1996). When expressing emotion with their peers, children may feel less comfortable for fear of being ridiculed. Similarly, when examining children's self-reports, primary school aged children reported showing more emotions within their family than with their friends (Zeman and Garber 1996).

Also, the gender of the interlocutor might play a role in how adults and children express their emotions. When examining gender differences in children's emotion expression depending on the interlocutor, findings of Chaplin and Aldao's (2013) meta-analysis suggest that with 0–17-year-old children, gender differences in nonverbal and verbal expression were not significant when the child was with a parent and were small with unfamiliar adults. If we examine children's gender differences in verbal emotion expression, we must draw upon the extensive research on mother-child emotion talk. Starting at age 2 in the US, Cervantes and Callanan (1998) found that 2-year-old girls talked more about emotions than same-age boys when completing a play-storytelling task; however, no differences were found amongst 3- and 4-year-old children. Similarly, by the end of preschool, US girls used more frequent and more varied emotion words than did boys (Kuebli, Butler, and Fivush 1995) during reminiscing. In contrast, Melzi and Fernandez (2004) found no gender differences in the frequency of emotion words mentioned by Peruvian preschool children when reminiscing with their mothers. Finally, with US adolescents discussing moral dilemmas with both parents, Aldrich and Tenenbaum (2006) found that daughters mentioned more emotion words than did sons. Taking these findings together, it seems that the effect of the conversational partner is not conclusive in determining gender differences in children's emotion talk, but when differences are found, girls tend to mention more emotion words than their male counterparts when in conversation with their mothers.

Although scant, there is some research examining children's emotion talk when in conversation with their peers. For example, Fabes, Eisenberg, Hanish, and Spinrad (2001) found no gender differences in the mean number of words or in the variety of emotion words mentioned by pre-schoolers in the US. In contrast, Kyratzis (2001), when examining the content of US preschool children's emotion conversations with their peers, found that over time groups of boys who were friends talked less about being frightened than girls. Moreover, girls in female friendship groups were more emotional in their conversations, whereas male friendship groups displayed a higher tendency to use aggressive language.

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In conclusion, these findings support contextual models of gender (Brody and Hall 2008; Brown, Craig, and Halberstadt 2015; Deaux and Major 1987; Fischer and Evers 2011; LaFrance, Hecht, and Paluck 2003), suggesting that the speaker's and the conversational partner's gender, in addition to children's age, influence children's emotional expression. These findings support the popular stereotype suggesting that in the Western culture, girls and women are expected to be affiliative and connected to others, whereas boys and men are expected to be assertive and autonomous.

5.3 Culture

Culture plays a central role in child development because cultural rules and norms influence how children are raised (Super and Harkness 2002). In the case of emotion expression, each culture has rules and norms that dictate how, when, and by whom emotions should or should not be expressed (Brody and Hall 2000; Eid and Diener 2001). It is through socialization practices guided through parents and other experienced members of the culture (Rogoff 1990) that children learn cultural rules, including those related to gender, about which emotions should be expressed, when and how (Fivush and Buckner 2000). Indeed, gender differences across cultures are closely linked with the idea of what being a woman or a man means in each culture (Williams and Best 1990). For example, in collectivistic societies where relational goals are more important than those of the individuals, emotions (especially negative ones, such as anger and pride) are thought to be destructive and dangerous to relationships and to social harmony (Chan, Bowes, and Wyver 2009; Wang 2013). In contrast, in Western cultures such as the US and Europe, where personal uniqueness and individual autonomy are valued, emotion expression is often encouraged because they are considered as the expression of one's self (Greenfield et al. 2003).

To date our knowledge about emotion expression is mainly based on research conducted in the US and in some Western European countries with white middle- and upper-middle-class children (Chaplin and Aldao 2013). Thus, it remains unclear whether these findings can be extrapolated to different cultures. Existing research indicates that women are indeed more emotionally expressive than men, but as we have explained throughout the chapter, these differences largely seem to be dependent on contextual factors. However, there are some instances of cross-cultural research on emotion expression. When looking at parent-child emotion conversations, Asian parents tend not to elaborate much when talking to their children (Wang 2001), whereas Euro-American parents tend to be more elaborative (Wang and Fivush 2005). Schroder, Keller, and Kleis (2013) examined Costa Rican, Mexican, and German parents' emotion talk while reminiscing with their 3-year-olds. Findings suggest that while families from all three cultures were similarly elaborative, German parent-child dyads were the least socially oriented of them all.

Research has also examined gender differences in emotion expression across cultures during parent-child reminiscing. Studies with Spanish-speaking participants have found that Mexican (Eisenberg 1999) and Spanish mothers (Aznar and Tenenbaum 2015) tend to use more emotion words when talking to daughters than to sons. In contrast, Peruvian mothers talked more about emotions with sons than with daughters (Melzi and Fernandez

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2004). There is also some research examining the style of parent-child emotion talk across cultures. With Euro-American families during reminiscing, both mothers and fathers have been found to be more elaborative with daughters than with sons (Fivush et al. 2003; Reese and Fivush 1993). In contrast, there is also research suggesting no differences in mothers' and fathers' level of elaboration with boys and girls (with a Chinese sample [Wang and Fivush 2005]; with a Peruvian Spanish-speaking sample [Melzi, Schick, and Kennedy 2011]). Finally, in a study comparing Chinese and American parent-child emotion talk while reminiscing, Wang (2001) found that both Chinese and American mothers mentioned more explanations with daughters than with sons. In sum, it seems that the effect of culture on children's emotion expression does not show a clear pattern and that more research is needed to determine the role that culture plays in emotion expression.

In contrast, there is scant research examining children's emotion talk when reminiscing with their mothers. For example, Wang and Fivush (2005) found that 40-month-old Chinese children attributed more emotions to themselves than same age US children. Also, US children talked more about the causes of their emotions than did their Chinese counterpart. Overall, Wang and Fivush (2005) found that children's emotion-talk patterns seem to mirror that of their mothers', which implies that the cultural values imbued in maternal emotion talk will play a role in children's emotion socialization and in the development of gender differences in emotion expression. Thus, these findings raise questions about why cross-cultural differences appear and specifically about what might in the Western culture promote gender differences in emotion expressivity.

6 Why are there gender differences in children's emotion expression?

As we have examined throughout this chapter, there are gender differences in emotion expression that appear through childhood and continue to be present through adulthood. However, the underlying mechanisms behind these differences are still unclear. Specifically, it is still unclear why gender differences in emotional expression appear. Traditionally, theories explaining gender differences in children's behaviour have been divided into two main approaches. One states that gender differences are stable and are due to biological differences, such as temperament (Else-Quest et al. 2006). The second one posits that gender differences are not stable and are based on experiential factors (Beall and Sternberg 1993; Bussey and Bandura 1999). Special relevance has been placed on the role of socialization (Chaplin, Cole, and Zahn-Waxler 2005; Wood and Eagly 2002), and especially the role that family plays in children's socialization of emotions (Denham, Bassett, and Wyatt 2014; Taylor et al. 2013). In this section, we will review three main theories that have been put forward to explain gender differences in emotional expression; namely, social developmental, biological and social constructionism (Chaplin 2015; Chaplin and Aldao 2013).

The social-development theory posits that children learn appropriate gender roles while growing up through modelling (observing the behaviour of those around them), explicit teaching (e.g., a mother would tell a child that girls play with dolls and boys with trucks),

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and experience. These three modes of learning the appropriate gender roles have different impact and relevance at different times during a child's development (Liben and Bigler 2002). Thus, according to this theory, gender differences in emotion expression increase with age as children have more socialization experiences. From this perspective, there are three main ways in which children learn about emotions: by witnessing others' expressions of emotions (modelling), by how their emotions are responded to (experience), and by explicit emotion talk (explicit teaching).

First, children learn to express their emotions by observing the emotions of those around them. This process is especially relevant during infancy, during which children learn about emotions through social referencing. The process of social referencing refers to the process through which infants observe their caregivers' affective displays of emotions to regulate their own behaviour towards situations, people, and objects around them, especially when these are ambiguous (Walden 1993). To illustrate the social referencing process, in the well-known visual cliff study, one-year-old children were more likely to cross a visual cliff if mothers showed a happy facial expression rather than a fearful expression (Sorce et al. 1985). With the exception of anger, both in naturalistic or in experimental conditions, women have been found to express more emotions on their face than men (Brody and Hall 2008; Calvo et al. 2014). These findings seem to be consistent across cultures (with European and Japanese samples [Scherer, Wallbott, and Summerfield 1986]). Thus, gender differences in caregivers' facial expression of emotions are likely to influence how children learn about emotions.

Second, children learn about emotions by how others react to their emotions. Cultural stereotypes suggest that it is more appropriate for females to express sadness than for males. In an experimental study, Cassano and Zeman (2010) found that when parents were told that their 9-year-old children had violated the gender-appropriate display of sadness, fathers were more dismissive of their sons than of their daughters. In contrast, mothers did not distinguish between their daughters and sons in their behaviour. These findings are consistent with research showing that fathers hold stricter gender stereotypes for sons regarding what they consider to be appropriate expressions of emotions (Garside and Klimes-Dougan 2002), which may explain why fathers are more upset when sons express sadness than when do daughters (Cassano, Perry-Parrish, and Zeman 2007).

Finally, children learn about emotions through explicit emotion talk. This is when children talk about emotions with their parents and, later on, with their peers and other adults around them. Through emotion talk, children learn rules about when and how it is appropriate to display emotions. Indeed, research shows that children whose mothers talk more frequently about emotions (Aznar and Tenenbaum 2013; Perez Rivera and Dunsmore 2011) and who elaborate more about emotions (Cervantes and Callanan 1998; Laible 2004; Laible and Song 2006; Van der Pol et al. 2015) have children with higher levels of emotion understanding than do children whose mothers do not talk as much or in such detail about emotions. Although there seem to be no gender differences in the amount of emotion talk mothers use with girls and boys (Aznar and Tenenbaum 2019), mothers tend to talk more about emotions than do fathers (Aznar and Tenenbaum 2015; Zaman and Fivush 2013). Gender differences in mothers' and fathers' emotion talk with their children do not only appear in the frequency of emotion talk but also in its content and style. Indeed, parents

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tend to talk more about negative emotions, such as sadness, with their daughters than with their sons (Fivush et al. 2000; Fivush and Buckner 2000; Van der Pol et al. 2015), whereas they talk more about anger with sons than with daughters (Fivush 1991; Van der Pol et al. 2015). Regarding the style of parent-child emotion talk, mothers have been found to be more elaborative when talking to their children about negative emotions than are fathers (Zaman and Fivush 2013), and both mothers and fathers have been found to talk more about the causes of emotions with daughters than with sons (Fivush et al. 2000). Thus, these findings seem to suggest that through conversations about emotions with their parents, boys and girls learn that it is more appropriate for girls and women to talk about emotions, especially about negative ones, than it is for boys. However, there are a few studies that have not found differences in the frequency of mothers' and fathers' emotion talk (Martin and Green 2005; Van der Pol et al. 2015) or in the style of emotion talk (Brock 1993). The underlying difference behind the different findings might be that different studies use different methods to elicit emotion talk and they also examine children of different ages, giving support to the idea of emotion talk as dependent on contextual factors. In sum, it seems that throughout their childhood and adolescence, boys' and girls' emotion expression is socialized to conform to the popular gender stereotypes that girls and women are more emotionally expressive than boys and men.

Biological theories posit that girls and boys are born with innate biological differences because of prenatal circumstances and/or birth or that in contrast these biological differences appear with age, leading to gender differences in different aspects of children's behaviour. There is evidence suggesting that sex hormones (of special relevance is the effect of testosterone) affect males' and females' brains differently. Specifically, higher foetal testosterone has been linked with boys' lower empathy levels (Knickmeyer et al. 2005a), lower quality of social relationships (Knickmeyer et al. 2005b), and higher levels of expression of aggression (Kemper 1990) when compared with those of girls. In contrast, it may also be that biological differences develop as the person grows. Of special importance is adolescence, when hormones may affect girls' and boys' development differently. For example, in girls, oestrogen and progesterone may be behind adolescent girls' increased difficulty to recover from stress (for a review, see Bale and Epperson 2015).

However, to date the role of biological processes in gender differences in behaviour is still inconclusive (Brody 1999). Indeed, evidence suggesting that there are sex differences in human brain structure and that males and females differ in how their brains mediate emotional expressiveness is not consistent (Brody 1999). For example, the direction of the relation between testosterone and aggressive behaviour is unclear. It could be that higher levels of testosterone lead to increased expression of aggression or, in contrast, it could be that higher levels of testosterone are a result of increased expressed aggressive behaviour (Kung et al. 2016). In addition, although size difference tends to be small and it varies depending on the verbal skill examined, women tend to have better language abilities than men (Hyde 2016). Specifically, one of the differences in language ability is that women tend to be more verbally emotionally expressive than men (Aznar and Tenenbaum 2013); however, what is still not clear is whether women's better language abilities result from differences in males' and females' brain lateralization (Brody 1999). It has been found that problems in language development are related to boys' difficulty with emotion regulation

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(Fujiki, Brinton, and Clark 2002). In sum, if there are gender differences in emotion expression, the biological differences between males and females could be a consequence and not a cause and, in any case, it can be suggested that gender differences in emotion expression are a consequence of the interaction between biology and social interactions (Brody 1999). Indeed, it seems that emotion regulation and language affect one another. For example, infants' emotion regulation predicts their language skills eight to nine months later (Dixon and Smith 2000).

Finally, *the social-constructionist theory* tries to explain the processes by which people try to make sense of the world we live in (Gergen 1985). In the case of gender differences in behaviour, the social-constructionist theory suggests that context plays a central role in shaping gender differences in children's behaviours. Indeed, girls and boys change their gender conduct depending on the circumstances (Bussey and Bandura 1999). Gender differences in children's behaviour appear at a young age, as stated by the biological and the social developmental theories, but as we have already explained in this chapter, they are greatly influenced by the context in which the child lives. According to the social-constructionist theory, gender differences are influenced by specific contexts and by societal expectations for males and females (Shields 2002).

In conclusion, these three theories attempt to explain the underlying mechanisms behind gender differences in children's behaviours, and more specifically in children's expression of emotions. However, most developmental theorists suggest that it is a combination of these theories and others that most accurately accounts for gender differences in children's behaviour. Indeed, taking these theories together, it could be suggested that gender differences in emotion expression increase as the child grows because biological differences between males and females increase with age and, at the same time, children's socialization experiences increase (Chaplin and Aldao 2013).

7 Concluding thoughts

In sum, the study of gender differences within the field of psychology has long been established. The main reason for this is that gender plays a central role in many aspects of children's and adults' life. Indeed, for young children gender is one of the most salient categories that they can use to try to make sense of the complex world that they live in. For decades, psychologists studying gender differences in behaviour were divided into those who advocated for gender differences as stable traits and those who argued that there are no stable gender differences. Those who assumed that there are stable gender differences could not explain the variability in sex differences, while at the same time, those who advocated that there are no stable gender differences could not explain the existing widespread gender differences in culture. Currently, most academics in this field have adopted a contextual approach to gender differences which suggests that where gender differences appear in children's behaviour, they depend on contextual factors such as culture or age (Brown, Craig, and Halberstadt 2015). However, it is important to note that there are still contextual factors that have not yet been extensively researched, such as ethnicity or socioeconomic status. Future research should examine such factors, as well as

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the interplay between them. In the specific case of the study of gender differences in children's emotion expression, research suggests that where gender differences appear, girls tend to be more emotionally expressive than boys, supporting cultural stereotypes of emotional expression. These differences appear throughout childhood and continue to appear during adulthood. However, it is important to note that these gender differences in emotion expression are influenced by many contextual factors.

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48 Emotions, language and aging

1 Emotions, language and aging: the state of the art
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Abstract: Different studies in cognitive psychology and psycholinguistics have focused on the relationship between the emotions and language and have concluded that the way in which we process emotions can modify our perception and understanding of our environment and significantly affect comprehension and linguistic production, with important cognitive consequences. The influence of the emotions on language appears to exist throughout life; however, what happens when we age? What impact do the emotional changes associated with aging have on language processing? This chapter looks at the way in which older adults process language with emotional valence, the influence of emotions on language comprehension and production, and the differences between old and young adults. The conclusion, at the end of the chapter, is that older adults understand and react to emotional messages with less intensity and with more control in comparison with young people, although they are more positive and optimistic; at the same time, older people produce more constrained and briefer emotional messages with fewer details and less information that younger subjects. Nevertheless, these findings must be considered preliminary, given that there is a lack of empirical evidence on the subject and that this is a new area of research.

1 Emotions, language and aging: the state of the art

The influence of the emotions on different cognitive aspects has frequently been analyzed in the last 30 years. Innumerable studies on the subject have concluded that adequate emotional recognition, control and production are crucial for the achievement of significant goals throughout life and particularly in old age (Márquez 2010). At the same time, psycholinguistic studies on the effect of aging on language comprehension and production report a variety of cognitive phenomena. First, it is a fact that aging produces a slowdown of information processing, reduces our working memory capacity and reveals itself in a clear inhibitory deficit, which are all factors that can interfere in the adequate processing of language, but which in no way constitute evidence of a deterioration that makes it im-

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possible for an older person to communicate successfully (Radvansky and Dijkstra 2007; Véliz, Riffo, and Arancibia 2010; Zwaan 2015). Considering therefore that both regulation of the emotions and language processing change during aging, the following questions can be asked: Do characteristics associated with aging influence the way in which we perceive reality? Do inhibition and emotional regulation during aging affect language comprehension and production? Do young and old adults understand and produce language in the same way when its content has a clear emotional valence?

As a point of departure to answer these questions, we can take attempts to explain the processing of language with an emotional valence through various theoretical models based on the interaction between existential aspects of the reader and characteristics of the causal narrative structure of a text. This conceptual approach says that the text emotionally influences readers as if they were invisible witnesses of the development of the story and of the emotions surrounding the protagonist (Dávalos and León 2017; Gernsbacher, Hallada, and Robertson 1998; de Vega 2005). Psycholinguists have suggested that readers construct a kind of mental "microworld" at the moment of understanding a text, which has been called a *situation model* or a *mental model* (Graesser and Wiemer-Hastings 1999; Johnson-Laird 2004; Kintsch 1998; Zwaan 2015). Thus there appear to be central aspects of the text that maintain the attention of the reader, such as the characters whose actions lead to the achievement of goals, or the events that constitute obstacles to the achievement of goals, conflicts between characters, the means of resolution and also emotional reactions to events and conflicts. From another point of view, in the corporeal perspective of cognition, linguistic processing is based fundamentally on model simulations embodied in the human brain, responsible for the partial activation of sensory-motor and emotional states during our experience in the environment (Barsalou 2003). Thus, the processing of language with emotional valence implies a partial re-experiencing of this emotion, but this only occurs when access to the sensory bases of the emotion is required by a specific task (Niedenthal and Maringer 2009; Niedenthal et al. 2009). Therefore, the understanding of language constantly evokes emotions (Havas, Glenberg, and Rinck 2007) that can be powerful and well defined, with a strong influence on our social judgments (Johnson and Tversky 1983).

Aging is a multifactorial process that takes place during the last stage of the life cycle. It is a deleterious, progressive, intrinsic and universal phenomenon that occurs over time in every type of living being as an expression of the interaction between the genetic programme of individuals and their environment. It is defined as deleterious because there are losses in physiological functioning; it is progressive because the losses are gradual; it is intrinsic because the losses are proper to the individual; and it is universal because the losses appear in all members of a species at a certain point in time (World Health Organization 2018). These changes do not occur suddenly and together, nor are they determined by a specific age (for example, after 60), change in work situation (for example, retirement), marital status or other. A consensus exists that an aging person presents a decline in certain motor, sensory and cognitive functions, in which the last-mentioned appears to be influenced by factors such as education, quality of life and genetic aspects (Steptoe, Deaton, and Stone 2015; Suzman et al. 2015).

Accordingly, aging can be defined as a stage of change, not only with regard to the senses and motor functions, but also cognitively and emotionally. For this reason, it can

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be assumed that emotional processing in older people influences language comprehension and production differently from in young adults. However, the influence of the emotions on language processing during aging is a recent area of study and to date little research has been carried out. Yet it is of clear importance for the future, since emotions are fundamental to an understanding of behaviour throughout the life cycle and particularly in old age (Márquez 2010). Research in cognitive psychology reports significant differences in emotional processing between young and old adults, based on the argument that the lower physiological activation characteristic of old age is associated with lower emotional activation (Timiras 2002). Let us look at some examples: Márquez et al. (2008) and Márquez (2010) showed that older adults express their emotions less, or off the topic, and are more inhibited in this respect, in comparison with young people, due to a restricted capacity for introspection and emotional identification characteristic of their age. For her part, Iacub (2013) found that older adults have less intense emotional reactions and are more cautious in relation to emotions than young adults, as a result of greater emotional regulation when they face intense feelings or situations. Carstensen and collaborators (Carstensen 2006, 2019; Carstensen, Fung, and Charles 2003) concluded after years of research that older people are more emotionally inhibited, but they regulate their emotions better than young adults; through experimental studies they showed that older adults exhibited less anger and had a more positive attitude in emotionally ambiguous contexts. To summarize, numerous empirical findings have demonstrated that emotional processing changes as we age, leading to the formulation of the socioemotional selectivity theory (SST), defined as the motivational shift in older adults as a result of the recognition of the finite nature of life, which leads them to optimize and positivize emotional experiences in different existential contexts (Carstensen 2006).

Although the number of studies focused on the influence of the emotions on language comprehension and production during aging is still limited, the results coincide with the findings previously mentioned, considering that the changes in emotional processing during aging – greater inhibition and emotional regulation in comparison with young people – can modify the way in which language is understood and produced when it is emotionally charged. Here we will briefly give examples from some studies that will be described in greater detail later in the chapter. Charles and Carstensen (2008) conducted a study of the recognition, regulation and production of opinions with emotional valence using a listening and comprehension task in which two groups, one of older adults and the other of young adults, were presented with recorded stories that contained inappropriate comments about them. The results showed that the older people expressed less anger when they heard the stories than the younger people, which can be explained by the greater emotional control exercised in old age. In another study on the recognition and production of messages with emotional valence, Ruffman et al. (2008) evaluated the emotional loquacity of older men and women and compared it to that of young adults. Their results were conclusive: the older men had greater difficulty in recognizing and producing sentences with emotional valence than the older women and young people, giving more unnecessary or irrelevant information in their messages. Márquez (2010) carried out research on production and found that older adults describe emotional situations in a more constrained, direct way with fewer details than young adults, which could be explained by the greater sup-

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pression or inhibition associated with old age and a dysfunctional physiological correlate. As can be observed, the evidence appears to indicate that older people demonstrate more emotional regulation when processing and understanding emotionally charged messages; in contrast, young people react intensely when they read or hear emotional stories that affect them. In relation to language production, evidence shows that older adults produce messages with emotional valence with a higher level of inhibition or suppression in comparison with young people, who do not inhibit or suppress their emotions when subjected to strong stimuli.

With regard to the research methodology used to conduct studies on the influence of the emotions on the processing of emotionally charged language by older adults, it should be mentioned that a good number of the experimental designs include comparisons between old and young adults given linguistic tasks with a particular emotional valence (positive, negative or neutral), always under controlled experimental conditions and with the use of artificial linguistic contexts. To date, no studies have been found that contrast the production and comprehension of emotionally charged language by older and young adults in more natural situations. In fact, little is known about the role played by the emotions and their real influence on the way in which older adults understand and produce language in a real, functional and spontaneous context. We believe that findings in this area would provide concrete indications on how older people perceive their immediate environment, making it possible to demonstrate that aging influences the way we understand emotions and perceive reality, thus broadening, on the one hand, our knowledge of the role of aging in the processing of emotional language and, on the other hand, providing evidence to support the importance of working on emotional aspects in healthy aging programmes that aim at the development of cognitive and behavioural skills.

2 Emotional processing during aging

Although the scientific study of the emotions is relatively new in gerontology, the expression and regulation of emotional experiences are now considered to be basic to the human condition, an analysis of which is essential for an understanding of behaviour throughout life and particularly in old age. As a result, in the field of gerontology, at least in relation to theory and research, it has finally been accepted that the experience and regulation of emotions are crucial aspects of human functioning that must be taken into account in order to understand and promote the well-being and quality of life of people facing the changes associated with aging. Thus, to successfully adapt to aging, older people need not only adequate and efficient biological and cognitive resources, but also effective intervention in the emotional and motivational structures and processes that favour this adaptation (Márquez et al. 2008).

Different theoretical models have attempted to explain emotional processing through classic, evolutionary, constructivist or corporal approaches, among others. But how does aging work in such models, generating the emotional changes described in older people? First, classic theories of emotion consider that emotional signals, including those from facial expressions, have an innate universal component requiring minimal conceptual pro-

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cessing of the information for recognition (Kowalska and Wróbel 2017). Paul Ekman (1999), who takes an evolutionary approach, is known for his classification of the basic emotions, focused particularly on the facial expression characteristic of each emotion. These basic emotions are happiness, sadness, anger, surprise, disgust and fear. Ekman (1999) assumes that the six basic emotional expressions correspond to six basic emotions, which are those that have a specific function in the survival of the individual and the species and which give rise to complex emotions derived from them. Along the same lines, Carroll Izard (2007) claims that there are ten basic emotions that have an innate adaptive function, a characteristic neuromuscular expressive pattern and a distinct subjective quality. These are joy, interest-excitement, surprise, fear, sadness, anger, disgust, contempt, shame and guilt.

Although emotion recognition through facial expressions is a basic human aptitude, this ability declines during aging, especially with regard to negative emotions, and this decline is more obvious in the context of dementia (Carvalho et al. 2014). Gonçalves et al. (2018) demonstrated through a meta-analytical focus that older adults identified facial expressions showing anger, sadness, fear, surprise and happiness less precisely than younger adults. However, the identification of disgust appears to remain intact with aging, as the performance of younger and older adults was similar in this respect. Sarabia-Cobo et al. (2016) also detected a progressive decline during aging in the capacity to identify emotional facial expressions. In short, most of the studies cited report that the capacity to recognize the intensity of expressions was one of the age-related variables that deteriorated to the greatest degree, although emotional valence was also poorly identified, particularly with regard to the recognition of negative emotions. Some authors have proposed an explanation for this phenomenon, namely, the socioemotional selectivity theory (Carstensen 2006; Carstensen 2019; Carstensen, Fung, and Charles 2003). This theory says that older adults show preferences in the processing of information, giving more attention to positive emotional information than to negative and remembering it more. When presented with these stimuli in pairs, older adults focus more on joyful expressions, which is an adaptive strategy to regulate emotions and avoid social conflicts (Narambuena, Vaiman, and Pereno 2016).

In the constructivist perspective of Lisa Barrett and James Russell (2014), emotions are not automatic or innate. On the contrary, we create them ourselves. They originate in physical sensations, past experiences and the acquisition of emotional concepts from our carers, education and culture. In other words, emotions are not direct reactions to the external world but the response of our brain to explain the cause of our sensations and actions in their context. Thus, babies begin their emotional learning at a very early age by acquiring simple concepts, forming categories and observing behavioural patterns. Children learn about emotions in different situations and contexts, associating their physical sensations of the moment with the emotion they are experiencing (happiness, fear, surprise, etc.). According to this theory, our brain ceaselessly classifies the physical sensations from the external world by using knowledge from past experiences. This categorization process constructs all perception and experience and without this categorization an emotion cannot emerge (Barrett 2017).

It is possible to establish a special link between the theory of constructed emotion and the gerontological theories of emotion, since the latter maintain that emotional changes during aging can be explained by the greater experience and social contact of an older

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person. For example, for Carstensen, Fung, and Charles (2003) and Carstensen (2006, 2019), the selection of personal goals depends on an individual's perception of time, which changes as life progresses, so that in old age emotional regulation is maximized and emotions become more complex. Fredrickson's (2001) theory also underlines the importance of emotional experience. She says that positive emotions enhance individual experiences by expanding the repertoire of ideas and behaviour, thus helping to develop long-term mental resources. She describes positive emotions in terms of *thought-action* repertoires, the function of which lies in their capacity to construct stable and lasting personal resources. Negative emotions, however, reduce the thought-action repertoire. The concept of *emotional balance* reflects the proportion of positive and negative emotions. If positive emotions predominate, the person is more receptive, creative and flexible, as well as inclined to look for solutions, to listen and to help. On the other hand, when negative emotions predominate, the person tends to close up, focusing on what is missing rather than what is there and becoming less tolerant towards other people and less inclined to cooperate. Another contribution to the field is the work of Labouvie-Vief (2015), which suggests that older people and more psychologically mature individuals are in closer contact with their emotions. They describe emotional reactions in a more complex way, perhaps as a result of their life experiences, since they have learnt strategies to manage their emotions, giving them a more comprehensive understanding of them. The emotional perception of older people helps them to separate emotional interpretations from objective aspects more effectively than their younger counterparts. Old age allows better processing of emotional information, resulting in better emotional regulation (León Aguilera 2014). Finally, new research has led to the proposal of the so-called emotional working memory (Mikels and Reuter-Lorenz 2019) in which affective experiences, emotions and feelings are interpreted as mental representations processed by the working memory, generating a dynamic integration between higher neuropsychological processes and emotional factors.

From a physiological perspective, it has been demonstrated that aging reduces the general efficiency of the immune system, as well as the somatic resources available to tolerate especially high levels of physiological activation and to recover corporal homeostasis when this has been upset by intense emotional states (Timiras 2002). These changes make it probable that emotional activation will be more prolonged, with particularly dysfunctional consequences for this age group. Other studies have shown that the frequency of both positive and negative emotions lessens slightly through life, the decrease being especially significant with regard to high activation emotions (for example, despair), which suggests that older people regulate their emotions more, experiencing less often emotional sensations with strong physiological activation (Pinquart 2001). In relation to subjective emotional experiences, Pinquart (2001) suggests that the emotions of older people are less intense, with less frequent extreme emotional states than young adults (who, for example: are "passionate", "fascinated", "radiantly happy" or "in despair"), more moderate emotional states being characteristic of old age ("to feel affection for", "to be interested", "satisfied", "displeased").

Specifically, in relation to emotional reactivity and emotion recognition and comprehension in the face of stimuli in different contexts, a number of studies demonstrate that the intensity of the response varies according to the relevance given by each age group

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(young or older adult) to the stimulus. The first laboratory tests on emotional reactivity indicated decreased physiological activation in older adults when they were watching emotional film clips, reliving memories or discussing conflictual subjects with their partners, compared with the strong physiological activation that young people showed in the same situations (Labouvie-Vief and Márquez 2004). However, when older adults saw films dealing with losses typical of old age, such as the death of loved ones, they reported stronger feelings of sadness and showed physiological reactions similar to those of young people (Kunzmann and Grühn 2005). Thus, although existing evidence suggests that old people mostly have less reactivity than young people, this is not true of all situations, which would go against the hypothesis that sees biological changes as the sole cause of the modification of emotional reactivity (Iacub 2013).

Other research has reported that old people have greater difficulty in recognizing facial expressions showing fear, annoyance and sadness in comparison with young adults, the last two emotions being those that give most difficulty, followed by fear (Wong, Cronin-Golomb, and Neargarder 2005). This difficulty experienced by older adults with regard to the recognition of the facial expression of certain emotions does not appear in relation to emotional experience and regulation, which are maintained and in some cases even improved during aging, such as, for example, emotional regulation (Blanchard-Fields 2007). For this reason, some authors have explained this phenomenon through the socioemotional selectivity theory (SST) (Carstensen, Fung, and Charles 2003), which says that older adults exercise preferences in information processing, directing more attention and memory to positive emotional information than to negative, which is to say that older adults tend towards the optimization and positivization of emotional experience.

The SST focuses on changes in emotional regulation as life progresses. Mather and Carstensen (2003) emphasize self-regulation and suggest that older people deliberately try to control the mix of emotional stimuli with the aim of achieving emotional optimization. They are therefore more proactive in their search for social surroundings that allow them to avoid negative emotions or conflicts while giving them sufficient intellectual and emotional stimulation. Carstensen (2006) believes that their understanding of their own mortality leads to a re-evaluation of motivation and the resulting intensification of gratifying emotional experiences in the present, prioritizing certain emotions, instead of giving more importance to future rewards. This change in priorities appears to improve their emotional state, since it reduces their acceptance of highly negative experiences that allow long-term goals to be reached. The SST also claims that older adults deliberately choose their interpersonal relationships, which is linked to emotional regulation and the greater suppression or inhibition of negativity.

These findings led to the idea of the positivity effect (Carstensen and Mikels 2005), originally defined as the change in the selection of positive information over negative that occurs in old age (Mather and Carstensen 2003). This implies the prioritization of present emotional gratification, so that older adults are more sensitive to positive information and less sensitive to negative information, or that they try to avoid what is negative. For example, in visual memory tests, young adults mentioned a similar number of positive and negative images, while older adults remembered more positive images than negative ones (Charles, Mather, and Carstensen 2003). In the SST the positivity effect is the result of the

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motivational changes that support emotional regulation. When goals prioritize well-being, people adapt by focusing more on positive information than on negative. In this way, selective cognitive processing can benefit the personal and social well-being of the individual (Johnson 2009).

In respect of showing emotion, some studies have found that older people suppress their emotions more in comparison with their younger counterparts (Márquez et al. 2008). The inhibition of emotional expression, also called *emotional suppression*, does not only attenuate the suppressed emotion, but is also associated with dysfunctional physiological correlates and seems to interfere with cognitive processes such as attention and memory (Mauss and Gross 2004). This tendency on the part of older people to express their emotions less can be explained by different factors. For example, it could be related to the clear inability of many older people to be introspective, to discern what they are feeling and give their emotions a name; that is, they have difficulties with emotional metacognition. In this sense, it is possible to surmise that the inability to analyze or reflect on one's emotions may be related to greater difficulty in expressing them (Márquez et al. 2008).

To summarize, the above studies on emotions in the field of gerontology demonstrate that older adults in general regulate their emotions better than young people and express them with less intensity, while at the same time they inhibit and suppress them more frequently. In addition, the findings support the socioemotional selectivity theory, according to which aging is accompanied by a motivational shift putting emotional experience optimization first in the hierarchy of significant goals for older adults and making emotional regulation a characteristic of advanced age that effectively avoids negativity and optimizes and positivizes interpersonal relationships and social situations.

3 Processing language with an emotional valence

Bower (1981) advances the idea that emotions are represented cognitively through a semantic network model, corresponding to an organized semantic structure in which every emotion or affective state is represented by a central node. For example, the nodes representing beliefs, experiences and the physiological patterns associated with *fear* are related to the central node of the concept fear indexed in the memory. So as an emotion is felt, the corresponding central node in the network is activated and then this activation extends to associated nodes, through which ideas and knowledge congruent with this emotion are in turn activated. At the same time, the activation of the information linked to this emotional network can also generate the emotion itself. Thus, there is an activation of all the concepts connected to this emotion, including physiological and corporal responses (Barsalou 2003; Niedenthal 2008; Niedenthal and Maringer 2009; Niedenthal et al. 2009). In this way, one emotion can inhibit another one that is qualitatively opposed, so *fear* can inhibit *joy*; but if two activated nodes do not inhibit each other, behavioural patterns can then be mixed, with the result that, for example, a person can be simultaneously surprised and sad. Consequently, every time we use our linguistic system, in each speaking act, the affective aspects linked to the different nodes that store our representation of reality are also activated, including, of course, our knowledge of the world and of language.

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Language makes it possible to communicate emotional states, which are actively processed by speakers. While hearing or reading a text, listeners or readers can follow step by step what is happening to the protagonist, without losing sight of their emotions. Their understanding contributes to the coherence of the story. Some behavioural studies show that listeners or readers are sensitive to the emotional valence of the events described, generating inferences about the emotional state of the protagonist (León et al. 2010). The comprehension of texts with emotional valence has been explained through various models that relate aspects of the reader's life to characteristics of the causal narrative structure of the text, it being claimed that the text has an emotional impact on readers, as if they were invisible witnesses of the development of the story (Gernsbacher, Hallada, and Robertson 1998; de Vega 2005).

The understanding of emotions in a text or narrative discourse is a two-way road. On the one hand, we need a comprehension model that makes it possible to explain how readers of a text or discourse create a mental model of the narrative. This comprehension requires readers to connect their knowledge of the world and of the psychological functioning of people to the surface code of the text in order to make inferences from this information about the psychological states and reactions of the characters in the text. On the other hand, the construction of the emotional path of the characters must arouse phasic and tonic emotions in readers or listeners. Within a mainly constructionist perspective, situation models (Graesser and Wiemer-Hastings 1999) assume that readers construct a mental microworld at the moment of understanding a text. The interest of the reader is sustained by a core plot that includes characters who act in order to reach their goals, events that constitute obstacles to these goals, conflicts between characters, ways of solving the conflicts, and emotional reactions to events and conflicts.

For Zwaan and Radvansky (1998), situation models are mental representations derived from the text and from inferences provided by long-term memory. In accordance with this idea, readers are not only influenced by the structure of a text, but also by the nature of the situation. These models consist of at least five interaction dimensions: time, space, causality, intentionality and the protagonist (Magliano, Zwaan, and Graesser 1999). Zwaan, Langston, and Graesser (1995) developed an event-indexing model to explain how readers construct coherent multidimensional representations for situations. According to their model, events and protagonists of these events are important in the construction of situation models. From this point of view, Zwaan and Radvansky (1998) suggest that emotions must be considered fundamental characteristics of protagonists and these emotions change in reaction to their success or failure to reach the established goals. At the same time, they also suggest that an understanding of the text can also be influenced by the emotions of the readers themselves (Radvansky and Dijkstra 2007).

Thus, the reader's emotions affect the construction of the situation model. Van den Broek, Risden, and Husebye-Hartmann (1995) suggest that the reader's level of commitment to an understanding of the text involves generating a more effective situation model, thereby increasing the standards for coherence and comprehension. Second, the reader's emotions are an important component in comprehension. Situation models take into account not only semantic knowledge, but also personal components, such as the emotional state of the reader and individual experiences (Kintsch 1998). Consequently, it must be considered that the emotional state of the reader can have a positive or negative impact on the process of understanding a text.

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A recent study in the same line looks at emotional inferences while reading (León et al. 2015). Research focused on this subject indicates that readers can infer the emotional states of protagonists while they are reading and that the activation of these inferences can take place automatically; that is, online. However, there is no agreement on which basic components produce them. Thus, while some authors assume that the emotional inferences possess a greater degree of specificity than other inferences more dependent on syntactic clauses such as anaphors (Gernsbacher, Hallada, and Robertson 1998), others are convinced that there is no such specificity, only more general factors (such as valence), which really have an influence on the level of activation. In this regard there are data that prove that valence, whether positive or negative, influences the activation of an emotional inference (Gygax, Tapiero, and Carruzzo 2007).

However, from the point of view of embodied cognition, linguistic processing is based fundamentally on simulations, embodied in the human brain, which are responsible for the partial activation of sensory-motor and emotional states during experiences in our environment (De Vega 2011). This paradigm is supported by a great deal of evidence that demonstrates the embodied nature of knowledge. For example, numerous behavioural and electrophysiological experiments have been conducted in psycholinguistics demonstrating that semantic representations established during the understanding of language have their origin in sensory-motor and emotional aspects (e.g., De Vega 2002; Zwaan 2004; Zwaan and Yaxley 2003). That is to say, linguistic comprehension appears to have a biological correlate which would imply a reactivation of cortical areas that usually govern perception, action and emotion (De Vega 2011).

In the same theoretical line, emotional processing would imply a partial re-experiencing of the emotion, but this occurs only when access to the sensory bases of the emotion is required by a particular task (Niedenthal and Maringer 2009). Thus, language comprehension evokes emotions (Havas, Glenberg, and Rinck 2007) which may be quite strong and which have an impact on our social judgments (Johnson and Tversky 1983). Nevertheless, this relationship has not yet been fully understood. One explanation linking the two ideas could be the concept of emotion simulation. In terms of language comprehension, simulation refers to a neural process that uses sensory, motor and emotional aspects to reconstruct a particular real experience (Havas et al. 2010). In addition, an explanation widely given with respect to the facilitation process of emotional understanding at the level of the sentence is the indexing hypothesis (Glenberg and Robertson 1999), in which the meaning of an event lies in a set of possibilities faced in a particular situation (Meteyard et al. 2012). This hypothesis includes three stages: in the first, the words or phrases are indexed or recognized through their representations; then probable uses for the elements or concepts are derived (affordances); finally, it is the syntax that guides the interaction between the affordances, through which understanding is facilitated (Havas et al. 2010).

4 Influence of emotions on language processing during aging

Are there real differences in language processing between healthy young and older adults? Different behavioural and electrophysiological experiments comparing language process-

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ing between young and older adults have established that the latter have greater difficulty finding the right words, organizing their speech coherently, recognizing words, and understanding complex grammatical structures. These experiments have also demonstrated that in older adults production deficits are clearly greater than those relating to understanding (Henderson and Harris 2016; Véliz, Riffo, and Arancibia 2010). Nevertheless, such deficits have limits that, although unclear, make it possible to differentiate between a cognitively healthy older adult and one with signs of disease (Juncos-Rabadán et al. 2013). One of the most frequently researched language levels in aging is lexico-semantic processing, particularly vocabulary access, which makes words rapidly, immediately and apparently effortlessly available to the speaker at the moment they are produced. This is one of the main cognitive mechanisms related to language that change in old age. Vocabulary access enables us to precisely select a word among the thousands in our lexicon, but under certain conditions the ability to select words rapidly and correctly may be affected by cognitive changes related to aging (Rojas and Riffo 2018).

There is no doubt that an extensive theoretical and experimental framework exists in certain research areas such as emotional behaviour in older adults, language processing during aging, or processing of language with emotional valence in young people. The situation is, however, completely different when we need to relate information on these three subjects, since few studies have been conducted on the processing of emotionally charged language during aging. Nonetheless, there is some research in the field of cognitive psychology that has focused on describing the way in which the emotions influence language processing and cognition during aging. These studies analyze the way in which old and young people identify, express and regulate their emotions through the application of behavioural experiments involving linguistic tasks that evaluate directly or indirectly comprehension and/or production.

Much of the evidence in the area of emotion, language and aging has been gathered through experimental studies that involve maximum control of possible sociodemographic variables that could distort the results, since factors such as intellectual coefficient, education and socioeconomic background can interfere in the way we perceive emotions, process language and grow older. However, the evidence on the impact of these variables on emotions tends to indicate that the educational level of older adults does not have a significant influence on the recognition of facial emotions, with the exception of the research conducted by Scherer and Scherer (2011), who investigated the effect of educational level on the recognition of vocal and facial expressions of the basic emotions. These authors reported on recognition indices in participants with primary, secondary and university education and found that those with more formal education performed better, although the difference between participants with primary schooling and those with secondary schooling was more pronounced, while that between participants with secondary education and those who had attended university was more subtle. Along the same lines, Narambuena, Vaiman, and Pereno (2016) discovered significant differences in the recognition of surprise and fear, and in the total index between groups with less than and those with more than 12 years of schooling. In this regard, Scherer and Scherer (2011) hypothesized and tested the existence of a link between cognitive capacity and the ability to recognize emotions, and they found significant associations suggesting that cognitive performance is related to schooling. Nar-

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ambuena, Vaiman, and Pereno (2016) confirm this hypothesis, demonstrating that older adults who perform better in the cognitive screening test recognize more precisely the emotions expressed in the photographs evaluated.

In addition, it is important to mention that most of experimental tasks in these studies involve materials that have been created from stories or texts with emotional valence (positive, negative and ambiguous). Others use photographs, emotional films or memory stimulators, which participants must first understand in order to later emit an opinion on the material presented, or to give an oral answer to a specific question. Experiments conducted according to the paradigm of embodied cognition have utilized facial expressions with emotional valence and have asked subjects to recognize or imitate these emotions, as well as to emit opinions on texts or emotional stories that may or may not be congruent with the facial expression evaluated; however, most of these studies have focused on young people. The following section, however, presents two studies that try to establish in part how emotions influence language processing and cognition during aging.

In the area of the comprehension and production of messages with emotional valence, the research of Charles and Carstensen (2008) stands out. They conducted emotional regulation tests in which they compared the responses of old and young adults, their sample being composed of 98 older adults and 97 young people. All participants had to listen to and understand stories with inappropriate comments directed at them. The conversations were divided into 4 segments and after each segment participants had to rate it on a Likert scale from 1 to 7 to indicate how annoyed (first question) and sad (second question) they felt because of the comments heard. Results showed that the older adults reported less annoyance (anger) when faced with the comments than their younger counterparts, but the two groups expressed the same levels of sadness. In addition, the older adults made fewer comments and expressed fewer judgments about the people who spoke badly of them and revealed less interest in listening to the reasons for the comments made. The above results are coherent with the processes of decoupling from offensive emotional valences that older adults experience.

Other studies relating linguistic comprehension and production tasks with emotional valence have demonstrated that older adults are more talkative in general than young adults when they express an idea or make a comment, this being attributable to the executive inhibitory deficit associated with aging; at the same time, they give less emotional information in comparison with young people. Ruffman et al. (2008), for example, investigated the level of loquacity of older people compared with young people while they were deciphering emotional expressions. In their study they evaluated the verbal expression of 61 older adults and 60 young ones using the parameters of total conversation time, including conversation time on the topic and off the topic. Results indicated that older men and women were significantly more talkative than young men and women. Nevertheless, older men had more difficulty in recognizing and producing sentences with emotional valence and provided more unnecessary or irrelevant information. The results are consistent with the idea that older men who speak more do so because they cannot clearly decipher the emotional signals of a listener (Ruffman et al. 2008).

With reference to tasks involving the production of messages with emotional valence, that is, the production of phrases, sentences and narratives, many of the studies available mention that older people, in contrast to young people, suppress the verbal expression of

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their emotions more (McConatha and Huba 1999), which is reflected in the lower quantity and quality of oral production associated with an emotional subject in comparison with younger counterparts. In this respect, it is important to highlight the work of Márquez (2010), who, through the application of questionnaires and scales and the analysis of data relating to a corpus of more than 160 older adults, established that people in this age group tell shorter emotionally charged stories, make verbal statements with less syntactic complexity, and provide fewer details when giving emotional personal information compared with young adults. This phenomenon could be explained by greater emotional inhibition during aging, which is reflected in language; in this respect, it is possible to hypothesize that older people have difficulty with introspection, with differentiating their own emotions and in labelling them, which could have repercussions on their language skills. This cognitive characteristic of aging, which is called emotional suppression, is associated with a dysfunctional physiological correlate and, as previously mentioned, appears to interfere with cognitive processes such as attention and memory necessary for the oral production of language (Mauss and Gross 2004).

In the identification, perception and comprehension of emotions, although strictly speaking outside the field of linguistics, the work of Kellough and Knight (2012) has made a notable contribution. They performed a study on the influence of age on the understanding of emotions presented through facial expressions by testing the impact of these emotional valences on personal projections into the future in an experiment involving 111 older adults and 127 young people. All participants had to complete a task that involved making a judgment about facial expressions with positive, negative or ambiguous emotional valence. The results showed that the older adults interpreted most of the facial expressions more positively than the young adults. Ambiguous expressions were also processed differently according to the age of the subjects, in that the older people gave them more positive emotional valence than their younger counterparts.

In addition to the above, specifically with regard to the regulation of negative emotional experiences, evidence has been found that young adults detect threatening stimuli more quickly than other types of stimuli. Mather and Knight (2006) conducted a study to discover if older adults also have this ability to detect threats. For each judgment in the experiment, participants analyzed a matrix of faces that they had to rate and describe. There were eight faces with neutral emotional valence and the ninth could be neutral or it could present a negative or positive emotional valence (annoyed, happy or sad). Participants had to indicate if there was one face different from the others in each matrix. Both older and younger adults were significantly quicker in correctly detecting a different face with threatening characteristics (annoyed), in comparison to happy or sad faces. The results showed that there were no differences between young and older people with respect to the correct detection of this threat, which indicates that this automatic process is maintained in older adults.

5 Final considerations

With the information given in this chapter, it is possible to arrive at some key conclusions to help us understand how emotions influence language comprehension and production during aging:

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First, with regard to emotional management during old age, studies in the fields of geriatrics and cognitive psychology agree that older adults inhibit and suppress the expression of their emotions in different contexts more than their younger counterparts and that they also regulate them better and react more calmly and positively when faced with negative emotional situations (Carstensen 2006; Iacub 2013; Márquez 2010). In this respect, Carstensen, Fung, and Charles (2003) and Carstensen (2006, 2019) concluded that older adults control their emotions better than young people, demonstrating less anger and more optimism in ambiguous contexts. This evidence has provided the basis for the socioemotional selectivity theory (SST), defined as the motivational shift in older adults resulting from the recognition that life is finite, leading them to optimize and positivize emotional experiences (Carstensen 2006; Johnson 2009).

Second, there exists an extensive theoretical and experimental framework relating to the processing of language with emotional valence, which explains how personal emotional experiences and those expressed in a text or situation can influence our way of understanding and producing language. In this context, it is important to highlight the situational model, in which readers of a text or listeners feel the emotions expressed there in a special way, associating them with their own experiences and knowledge (Kintsch 1998; Radvansky and Dijkstra 2007; Zwaan 2015; Zwaan and Radvansky 1998). On the other hand, in terms of embodied cognition the linguistic processing of an emotion generates a partial re-experiencing of this emotion, so that the readers or listeners of an emotionally charged text or discourse may even perceive it as their own (De Vega 2005, 2011; Zwaan 2004). These theoretical lines have served as the basis for many experiments that appear to agree that, independently of the paradigm used, the emotional management of readers can influence positively or negatively the emotional connotation that they give to a particular linguistic message, and, vice versa, the emotional situation described in a text or discourse can emotionally influence readers in a positive or negative way.

Third, changes in the processing of emotions during aging influence the way in which older adults understand and produce language when it is emotionally charged. They tend to regulate their emotions more because of reduced physiological activation compared with young people (Timiras 2002). This makes them react less angrily and more positively when faced with emotionally ambiguous situations, which appears to influence language comprehension in emotionally uncomfortable situations, since they tend to make positive judgments in reaction to scenarios that affect them negatively, and moreover they react with less annoyance and greater tranquility when they listen to stories with negative comments about themselves (Charles and Carstensen 2008). From the point of view of production, the way in which older adults process their emotions also appears to influence the emission of oral messages. Studies in cognitive psychology provide evidence that establishes that older adults inhibit and suppress their emotions more than young people (Márquez et al. 2008), as a result of dysfunctional physiological correlates that seem to interfere with cognitive processes such as attention and memory (Mauss and Gross 2004). This fact plays a key role in the production of emotionally charged messages, since older adults make statements that are short, precise and less informative than those of young people, which reflects the emotional inhibition and suppression associated with old age. It should be pointed out, however, that although older people display oral production characteristic of aging, it tends to be verbose and off the topic, with little information (Márquez 2010; Ruffman et al. 2008).

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Finally, the lack of specific studies on emotional language processing during aging leads us to conclude that the above findings are definitely preliminary. We believe that a greater empirical basis is needed to determine with any certainty the effect of the emotions on language processing during aging, providing concrete indications on how older people perceive the reality of their immediate surroundings. On the one hand, this would increase our knowledge of the role of aging in emotional language processing, and, on the other hand, it would provide evidence for the need to work on emotional aspects in healthy aging programmes aimed at the development of skills related to cognitive coping and the achievement of goals.

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XI University and relativity of emotions and their expression: Basic emotions and dimensional classifications

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Maïa Ponsonnet

49 Emotional linguistic relativity and cross-cultural research

1 Introduction
2 Emotional linguistic relativity
3 Emotional linguistic relativity in psychology
4 Exploring linguistic diversity
5 Conclusion
6 References

Abstract: The now classical question of "linguistic relativity", which hypothesizes that language can influence thought and behavior, becomes a more complex hypothesis when applied to the semantic domain of emotions. This is because the linguistic encoding of emotions can influence not only the way we *think* about them, but, potentially, also the way we *experience* them. This chapter discusses the implications of "emotional linguistic relativity" and reviews the psychological theories of emotions that support this hypothesis. I then show that our current linguistic knowledge about the ways languages across the world encode emotions, although limited in many respects, should be sufficient to test the emotional linguistic relativity hypothesis with respect to resources such as words and metaphors. Overall, it seems that what is needed to progress on this question is interdisciplinary dialogue between linguists, psychologists, as well as anthropologists.

1 Introduction

Emotion is a fundamental dimension of human experience, and yet different languages offer very different means to talk about it (see Heelas 1986; Wierzbicka 1999; among many others). Anthropological research has long confirmed that although there may be *some* universal features in humans' emotional experiences, emotions are also culturally informed (Myers 1979, 1986; Levy 1984; Lutz 1986; Rosaldo 2013), so that people in different human groups can experience emotions in distinctive ways. In addition, recent psychological studies tend to corroborate the idea that language can influence the way we construe or experience emotions (see, for instance, Lindquist and Gendron 2013; Wood et al. 2016). So, should we conclude that the way we feel may depend, at least in part, upon the language(s) we speak? What is the weight and role of language in constraining variation in the way we experience and deal with emotions? In other words, what is the scope of "*emotional* linguistic relativity"?

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This question is particularly thorny because the answers bear on at least three different matters: languages and their diversity, emotions and their diversity, and the relationship between linguistic and emotional diversity. This splits the task between at least three disciplines, namely linguistics, anthropology and psychology. Linguistics provides descriptions of emotion-oriented linguistic resources in different languages across the world, but emotional experience, conceptualization and behavior fall out of its scope. Anthropologists have contributed very fine discussions of emotional experience in a range of different cultural groups. They often consider language as well, but they tend to assume rather than question linguistic relativity (Ponsonnet 2022a). Linguistic anthropologists do consider both language and emotions together, but to my knowledge they rarely produce the sort of comprehensive systematic studies that would highlight regular correlations between linguistic variation and variation in conceptualization and experience. Some psychologists have considered the role of language in emotional experience, conceptualization and behavior. However, apart from a few exceptions, they are not concerned with linguistic diversity as such, and to my knowledge no psycholinguistic study has sought to test emotional linguistic relativity so far.

This chapter will discuss the contributions of these disciplines towards our understanding of "emotional linguistic relativity", to which extent the hypothesis may be considered viable, and for which aspects of language it could possibly be tested. The linguistic relativity hypothesis itself and its implications in the domain of emotions are discussed in Section 2. Section 3 reviews some of the suggestions contributed (often implicitly) by psychologists about the plausible mechanisms behind this hypothesis. In Section 4, I present the current knowledge and understanding of the cross-linguistic diversity in the domain of emotions, and how it articulates with the findings and speculations in other disciplines.

2 Emotional linguistic relativity

This section introduces the now classical "linguistic relativity hypothesis", and its developments in the domain of emotions – hence "*emotional* linguistic relativity". Defining emotions in the context of this chapter is difficult, because this synthesis will discuss the work of many authors from several disciplines, and these authors do not share a common definition of emotions (Widen and Russell 2010). For lack of a better solution, the article was written with a relatively consensual definition in mind: emotions seen as *internal* states (emotional behaviors being their observable counterparts) that are *cognitive* (contrasting with sensations such as pain or hunger) and have a *subjective* component (unlike pure judgments, e.g. to agree) (see Ortony, Clore, and Foss 1987; Ponsonnet 2020: 20–21).

2.1 The many ways in which language can influence our emotions

The canonical linguistic relativity hypothesis (or "Sapir/Whorf hypothesis") was inspired by Whorf (1956) after early discussion from Humboldt ([1836] 1988) and Sapir (1949) among others. It postulates some causal influence of language (i.e. usually, the particular linguis-

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tic resources offered by a given language), upon thought (conceptualization, i.e. the ways in which emotions are grouped by the brain into categories), and practices (speakers' behaviors, habits, etc.) (Lucy 1992). Much of the research and discussions focus on the first correlation, between language and thought. While a "strong" version of the hypothesis that would postulate strict determination of thought by language is largely deemed implausible, psycholinguistic "neo-whorfian" research has established that the "weak" version may have some validity, demonstrating *some* influence of language in *some* domains. Levinson (2003) famously showed that the type of spatial descriptions prevalent in a given language impacts speakers' representations of space, suggesting that language could influence thought; and speakers' behavior in space, suggesting that language could influence practices. While these conclusions set an important milestone in the exploration of the Whorfian hypothesis, Enfield (2015) for instance calls for further testing in more socially relevant domains, i.e. domains where interactions between speakers and their understanding of each other's internal states play a more prominent role.

The domain of emotions is a complex and socially significant domain. In addition, intuition suggests that, as represented in Figure 49.1, the hypothetical paths of linguistic relativity in this domain are multilayered, for several reasons. At the first level of implication where language has some influence on "thoughts" – i.e. things happening "in the brain" –, we can hypothesize influence upon two different dimensions: on the one hand, the conceptualization of emotions, matching the more generic linguistic relativity hypothesis; and *experience* of emotions on the other hand. In other words, with respect to emotions the question is not only "can language influence the way we think?", but also "can language influence the way we feel?". Secondly, it seems plausible that the way we conceptualize emotions influences how we experience them, which opens another indirect hypothetical path of influence between language and how we feel (see 3.2 and 3.3). For instance, French is unusual in having a word for 'the pleasure of being in a new and different place', or *dépaysement*. If having such a word makes it easier for French speakers to conceptualize the corresponding emotional states, perhaps it also favors their experiencing these states? Thirdly and finally, if we consider the second part of the linguistic relativity hypothesis, i.e. influences of language on practices, we should also hypothesize feedback effects (see 3.4). Indeed, our practices about emotions, for instance emotional management, support and attention given to emotions, are very likely to influence how we feel (and this is presumably a recursive mechanism). For example, having a word for *dépaysement* may bring French speakers to discuss the corresponding emotion more often, and possibly seek it more often as a result? Thus, as can be seen in Figure 49.1, there are at least three additional intuitively plausible paths that may justify how language can influence the way we experience emotions.

The hypothetical paths highlighted in Figure 49.1 are very abstract, speculative and schematic, covering psychologically and socially complex phenomena, but they do offer a background and a starting point to our understanding of emotional linguistic relativity.

2.2 Language as a window on emotions

Linguistic relativity is specifically the hypothesis that language influences conceptualization and practices. As such, it should not be conflated with the converse hypothesis repre-

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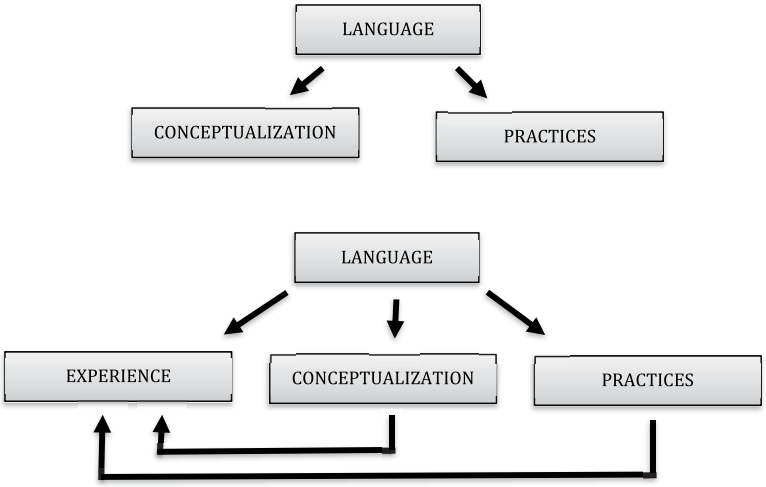

Fig. 49.1: Top: General linguistic relativity hypothesis. Bottom: Emotional linguistic relativity hypothesis.

sented in Figure 49.2 (right): that concepts and practices shape language, implying that linguistic tools mirror their speakers' experience, conceptualization and practices about emotions (Enfield 2002a; Ogarkova 2013: 47–50).

Implicitly relying upon the hypothesis that emotion words mirror salient emotion categories, many studies do use language as a "window on emotions". The accounts of emotional life provided by anthropologists such as Briggs (1970), Myers (1979, 1986), Rosaldo (1980) or Lutz (1986), are largely structured around the emotion lexicon – in fact, more often, emotion nouns – used as a blueprint of emotional behaviors and values. Myers (1979), for instance, organizes his analysis of the Pintupi "moral order" around six Pintupi emotion nouns namely *pukulpa* 'happiness', *ngaltu* 'compassion', *yalurrppa* 'sorrow', *watjilpa* 'homesick, lonely', *kunta* 'shame'. This focus on nouns is problematic, because it is a feature of Australian languages that they have few emotion nouns (Ponsonnet 2016), but these languages have many more emotion terms in other word classes.

Approaching emotions via language obviously has heuristic virtues (as attested by the richness of the above cited anthropological studies), and there are many reasons to think that linguistic tools reveal *something* about the representations and practices of their speakers (Enfield 2002a). Among anthropologists, Levy (1973, 1984) suggested a more specific model sustaining this mechanism, with the notion of hyper/hypocognition: not having a word for a given emotion implies that it is socially and experientially "played down", as

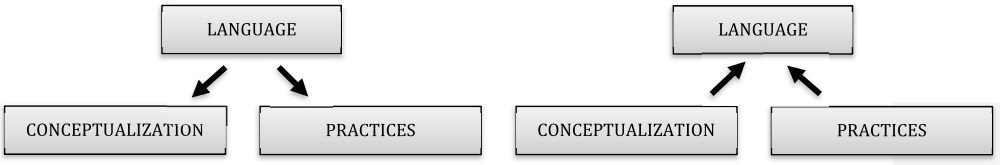

Fig. 49.2: Left: linguistic relativity hypothesis. Right: "language as a window on emotions" approach.

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he observes for sadness in Tahiti. Several linguistic theories have defended the view that thorough definitions of emotion words reveal emotional scenarios that tell us about the interactional contexts in which emotions occur and the emotional stages they involve. In this perspective, Wierzbicka (1999: chap. 6) has argued that the particular emotion words a language has mirrors its speakers' values and habits, by virtue of the emotional and interpersonal scripts encapsulated in these words. For instance, the profusion of words for 'good feelings' in English (e.g. *cheerfulness*, *friendliness*, *enthusiasm*, *enjoyment*, *fun*, etc.) is considered an effect of the prevalence of these feelings in "anglo" culture, while the positive connotations of some Polish words for negative feelings (e.g. *tesknota* 'nostalgia/homesickness/longing/heartache') mirror social acceptance for negative emotions.

Also dealing with scripts but extracting them via a different route, Kövecses (2000, 2002) contends that emotion metaphors (see 3.3.2 and 4.2) tell us about typical emotion scenarios. For instance, the generic metaphor ANGER IS A PRESSURIZED FLUID IN A CONTAINER points to various phases of anger – onset, attempts to control, and finally expression of anger – and highlights the social imperative to control anger. In addition, the particular instantiations of this generic metaphor used in each language may unveil cultural differences in conceptions and values related to anger among each language group (Ogarkova, Soriano, and Gladkova 2016).

Yet another method seeking to find out about emotion categories via emotion words leans upon the GRID paradigm (Fontaine, Scherer, and Soriano 2013) and GRID questionnaire page of the Swiss Centre for Affective Sciences. The GRID instrument is a questionnaire on emotion words designed to highlight various components of emotions (e.g. bodily effect, behavioral response, intensity), themselves hypothesized as defining components of emotions under the appraisal psychological model of emotions (Scherer 2013). Speakers' answers to the GRID questionnaire are therefore expected to reveal profiles corresponding to the psychological nature of corresponding emotions, then to be compared across languages.

The insights offered by these studies suggest that the "language as a window on emotions" approach has undeniable benefits. However, it is important to remember that the correspondence between words or metaphors on the one hand, and concepts (or practices) on the other hand, has not been extensively tested. In fact, psycholinguistic studies in other semantic domains have shown that words do not systematically reflect conceptual configurations (Malt and Wolff 2010; Malt et al. 2011), and there are known exceptions to the "words as sign posts to practices" axiom in the domain of emotions (Ponsonnet 2014a: 207–217). A safe caveat with respect to the "language as a window on emotions" approach is perhaps simply to remember that windows can only show a small portion of what is hidden by our walls. In other words, they offer partial perspectives, but a partial perspective is often better than none. In any case, it is important to distinguish the "language as a window on emotions" approach from the linguistic relativity hypothesis, and in this chapter I will be concerned primarily with the latter.

2.3 Relevant dimensions of language

If emotional linguistic relativity is a complex matter, emotional language is certainly complex too for a start, as it recruits extensively from a broad range of resources. In this section

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I highlight two distinctions between aspects of language that will be relevant to the following discussion of emotional linguistic relativity.

2.3.1 Description versus expression

Linguists who have studied the language of emotions (for instance, Besnier 1990: 419; Bednarek 2008; Foolen 2012: 350; Majid 2012a: 432; Ponsonnet 2014a: 21–22; among many others) have often relied upon a simple dichotomy between two types of linguistic resources: descriptive linguistic resources on the one hand (mostly words, e.g. "she is *impressed*"), and expressive linguistic resources on the other hand (for instance, evaluative morphology, prosody, interjections, e.g. "*wow!*"). Most of the time, expressive resources are implicitly defined as those that fall under Bühler's (1934) notion of symptom, or Peirce's (1955) notion of index: they result causally from a state experienced by the speaker. Subsequently, an emotive interjection like "*wow!*" can only express the speaker's state at the time of utterance. By contrast, descriptive resources – for instance a lexical item like *impressed* – enable speakers to refer to anybody's state, at any point in time: "she was *impressed*", "she will be *impressed*".

Descriptive resources mostly include the lexicon (i.e. words), as well as metaphors and some grammatical constructions. Expressive resources include a more diverse – albeit less studied – range of resources such as morphology (typically evaluative morphology, for instance diminutives, like the *-y* in *kitty*), interjections, prosodic features such as melodic contours or voice quality, marked grammatical constructions, choice of register, etc. (see, for instance, Besnier 1990; Majid 2012b). Expressive resources are typically backgrounded in metalinguistic awareness, where descriptive resources like words are naturally prevalent (Silverstein 1993). We may expect that these two semiotic types require distinct treatment when assessing linguistic relativity.

2.3.2 Linguistic resources versus the way speakers use them

Languages across the world offer very different tools to their speakers, both in terms of vocabularies and grammatical rules. We know that many languages have words for emotions that have no equivalent in most other languages – like the German *schadenfreude*, i.e. satisfaction felt at someone's misfortune (Watt Smith 2015), to cite just one among many famous examples. Some languages can encode fear or surprise grammatically by means of constructions called apprehensive and mirative, while many others cannot. From this point of view, languages provide tools and rules that define quite strictly the utterances that speakers can form to talk about emotions.

In addition, languages come with sets of conventions and habits that dictate usage (Hymes 1972): how speakers should employ their lexical and grammatical tools to address each other depending on context and social status, articulate narratives; what topics are appropriate for conversation and with who, etc. For instance, it is customary for English speakers to utter "thank you" or something equivalent to acknowledge a service, even if

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the service was paid for. Among speakers of many languages, for example Kriol in the Australian Northern Territory, this linguistic practice is far less systematic, even though the language does have the word *teingkyu* 'thank you'. Such rules differ from grammatical rules in nature and are sometimes referred to as rules of "pragmatics". While some of these rules are as prescriptive as grammatical rules, others may be better viewed as preferences rather than rules, for instance using conditional modality for requests in English, "could you pass me the salt?"; and/or leave grey areas, for instance the choice between *vous* and *tu* in French. Violating usage rules and violating grammatical rules attracts very different consequences. There may be interdependence between pragmatics and grammar (for instance, grammar may provide pronouns of honorary address, while honorary addresses are orchestrated by conventions of discourse pragmatics), but many rules of usage are relatively independent from the rules of grammar. Thus, we may imagine a group shifting to a new language with a completely different grammar, and yet maintaining many of their usage rules (see Nicholls [2013] and Ponsonnet [2020] for an example in Australian Kriol). Overall, the two types of rules are two different beasts altogether, and this distinction should be kept in mind when considering linguistic relativity in the domain of emotions, where rules of usage play a crucial role (see 3.3.3 and 3.4).

2.4 What is needed to assess emotional linguistic relativity

There are several possible ways to demonstrate correlations between the linguistic encoding of emotions (resources and usage) on the one hand, and experience, conceptualization and practices about emotions on the other hand. One way consists of proceeding typologically, by collecting a large amount of empirical data relative to the observable elements on each side of the equation – namely, languages and practices – to be able to identify recurring patterns of associations between the two. That is, given a large number of linguistic descriptions, and a large number of ethnographic descriptions of emotional practices for the corresponding groups, it may be possible to show that certain linguistic features typically come together with certain practices. Establishing such correlations would presumably not tell us about the causal directionality between language and practices (2.2), but would nevertheless be an interesting step forward. In this approach, linguistics must combine with ethnography in order to demonstrate or invalidate emotional linguistic relativity.

Our linguistic knowledge about how emotions are described and expressed across the world's language is still incomplete (see Section 4), but some aspects such as words or metaphors are reasonably well known. However, systematic ethnographic descriptions of emotions are relatively rare. In addition, linguistic and ethnographic studies have so far not been tailored to mirror one another, so that mass comparisons between the two are beyond our reach for the moment. Adopting areal foci (e.g. on a language family or a part of a continent) and/or specific linguistic targets could render the task more affordable. For instance, studying systematically the correlation between the type of metaphors of anger available in a language and the way speakers of this language deal with anger socially and individually may be feasible given our current knowledge of emotion metaphors (Ogarkova, Soriano, and Gladkova 2016; Kövecses and Benczes, in prep.) and the circumscribed

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nature of the ethnographic studies required. Remaining obstacles are the inherent difficulties in systematizing ethnographic studies, as well as lack of concertation between the disciplines.

Another option to tackle the emotional linguistic relativity hypothesis consists of testing it experimentally. Indeed, psycholinguistic experimentation was the path via which potential linguistic relativity was made apparent with respect to descriptions of space (Levinson 2003; see 2.1). Some psychological studies have experimentally tested the impact of subjects' linguistic background upon their interpretation of non-conventionalized prosodic variation (Elfenbein and Ambady 2003; Pell et al. 2009; Sauter et al. 2010; Bhatara et al. 2016). These studies mostly report that the interpretation of prosody is independent of the subjects' linguistic background (albeit with some in-group advantage). While this could be interpreted as a marginal indicator against linguistic relativity, what was really tested in these studies was the universality of non-conventionalized expression of emotions – not the influence of the conventionalized encoding of emotions upon one's experience, representation and practices about emotions (Scherer, Clark-Polner, and Mortillaro 2011).

As will now be discussed in Section 3, psychologists themselves articulate relatively specific hypotheses about the role of language in shaping emotional experience, conceptualization and practices (behavior).

3 Emotional linguistic relativity in psychology

In relatively recent years, the "basic emotion" theory (Izard 1977; Ekman 1992), which postulated a subset of primary emotions construed as universal "natural kinds" and reflecting unified patterns of physiological and neurological activity, has largely been superseded by models that allow for more complexity. Under these new models, "basic emotions" are backgrounded or altogether replaced by notions of emotions viewed as multi-dimensional events resulting, in part, from cognitive processes (Scherer, Shorr, and Johnstone 2001; Mesquita 2003; Boiger and Mesquita 2012). Such emotions cannot be systematically matched with physiological or neurological processes, and instead the unity of our experience of, say, fear or anger, is largely constructed. Based on such models, most authors concur that emotions are not strictly universal but allow for some cross-cultural variation (matching empirical observation, see 2.2), and that language can significantly influence our construction of emotional experience. These hypotheses are already supported by research on bilingualism, which show precisely how the affective experience of bilinguals is affected by the language they speak (Pavlenko 2014: 245–298). Beyond the specific case of bilingual individuals and the relationship between first and second languages, current psychological research supports the emotional linguistic relativity hypothesis and the idea that language influences thoughts and experience – although psychologists rarely use the expression "linguistic relativity" itself, and in fact rarely consider linguistic diversity at all. In the following section, I present some of the specific suggestions articulated by psychologists about how language may influence emotional experience, conceptualization and practices or behaviors.

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3.1 The expression-discharge hypothesis

A common assumption about the relationship between language and emotions is basically that "it's good to talk" (Wilce 2009: 78). This folk theory is reflected in metaphors like "get it off your chest", where negative emotions are figuratively depicted as an intrusive element to be expelled from inside the person (see Kövecses [2000: 154–156] on BODY AS A CONTAINER OF EMOTIONS metaphors). This idea that verbalizing one's emotions *as such* directly provides emotional relief – referred to as the "expression-discharge hypothesis" by some psychologists (Rimé 2009: 74) – construes language as a management tool capable of alleviating negative emotions. This would mean, for instance, that an English speaker vocalizing their disgust by saying "*yak!*" would as a result feel less disgusted (Byrne 2017). If this view of language is correct, then differences in the linguistic resources, or in conventions of use guiding the expression and description of emotions in various languages, could make a difference as to which emotions can more easily be expelled, and therefore modify the way speakers ultimately feel.

However, while the common assumption that "getting it off your chest" may echo humans' demonstrated need to share emotional experiences (Rimé 2009: 65–71), the evidence for direct causation between expression and relief is debated. There is some (neuro-)physiological evidence in favour of this hypothesis (see for instance Byrne [2017], Wood et al. [2016: 274] on responses of the amygdala to emotion labelling; Lieberman et al. [2007], Lieberman et al. [2011]) but on the other hand, several studies suggest that the benefits of discussing one's emotions does not result from an expression-discharge mechanism, but from complex cognitive and social mechanisms (Rimé 2009: 74–80; see 3.4).

3.2 Language and experience: words as "glue"

In line with early suggestions by Russell (1991), Barrett (2009) hypothesizes that emotion words are categorization tools that "glue the various instances of [a given emotion] together into a single category" (Barrett 2009: 1292). That is, emotional experience does not naturally divide into strictly differentiated clusters. Instead, variation is the rule, and the fact that people group diverse experiences under certain labels is an effect of the power of categorization of words. Elaborating upon Barret's (2009) suggestion, Lindquist and Gendron (2013) claim that "language constructs emotion perception", arguing that the words we use to describe emotions define our experience of our emotions (i.e. our feelings in Scherer's [2013] sense of the term). Given that different languages offer different sets of emotion words to their speakers, these views imply that speakers of different languages should categorize emotional experience in different ways, and thus experience emotions differently – but this has not been systematically tested.

3.3 Language, emotional intelligence and emotional management

Another way in which language may, according to psychological research, influence emotional experience has to do with emotional management and the regulation of negative

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emotions. Apart from the expression-discharge hypothesis (3.1), several mechanisms of linguistic influence have been postulated in this respect, some depending upon linguistic resources as such (i.e. emotion words), and others depending upon the rules governing the use of these resources to produce discourse and narratives about emotions.

3.3.1 Expanded lexica

The first mechanism, having to do with words and discussed by Wood et al. (2016) for instance, derives from the role of categorization highlighted in 3.2. According to Wood et al., the true functional reason why languages have emotion words at all is not for the sake of their descriptive power, which they regard as very limited. Instead, in line with psychological research showing that linguistic categorization has a potential to impoverish cognition (Schooler and Engstler-Schooler 1990, cited by Enfield 2015: 208), Wood et al. (2016) postulate that the function of emotion words is to help us regulate intense emotions: "labelling and thus categorizing an emotion may demote it from an immediate, driving urge to an object we can consciously attend to" (Wood et al. 2016: 274). In this hypothesis, not only do emotion words define our emotional experience (as discussed in 3.2), but they also support regulation, and thus well-being (for more discussion and references, see for instance Memarian et al. [2017]).

The view supported by Wood et al. (2016) assumes a broader correlation between the capacity to reason and make adequate inferences about emotions, i.e. emotional intelligence on the one hand, and successful emotional management on the other hand. Indeed, and although this trend of research is still in its early stages, psychological studies have confirmed some correlation between emotional intelligence and emotional well-being (Schutte et al. 2002; Fernández-Berrocal and Extremera 2016). It is in this perspective that Wood et al. (2016) suggest that having a larger number of emotion words could allow for further emotion management (see also Malt, Gennari, and Imai 2010: 34). Based on the same hypothesis, Lomas (2016) proposed that exposure to cross-linguistic lexical diversity may help improve our emotional well-being: by learning more words, we should improve our emotional intelligence, our capacities to regulate emotions, and ultimately feel better. This suggests that speakers of languages where words denoting, say, guilt, are absent – as is often the case in Australian Aboriginal languages for instance – may find it harder to manage their experience and behaviors in contexts where emotions akin to what we call guilt in English are at play. Lomas (2016) (one of the only psychological studies referring explicitly to the linguistic relativity hypothesis) cautiously suggests that studying emotion lexica from a broad range of languages and cultures may be a beneficial exercise. Expanding upon Lomas's (2016) suggestion, we can note that cultural and linguistic diversity is not the sole source of lexical diversity: speakers of all languages can coin new emotion words to refer to fine-grained emotions – and many actually do. The notable online presence of broad-audience webpages offering a "Dictionary of Obscure Sorrows", "23 perfect words for emotions you never realized anyone else felt" (Dalton 2015), "40 words for emotions you've felt but couldn't explain" (Wiest 2016) suggests that speakers are inclined to implement such strategies themselves. To my knowledge, no study has yet explored whether/

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how such strategies also take place in everyday life (e.g. in conversations, in personal diaries), or the extent to which they result in improved well-being.

3.3.2 Emotion metaphors

If we assume a correlation between emotional intelligence, emotion regulation, and well-being, then the structure of the emotion lexicon is not the only aspect of language that can alter or improve the way we feel. Metaphors, as originally theorized by cognitive linguists under the Cognitive Metaphor Theory (Lakoff and Johnson 1980; Lakoff 1987; Kövecses 2002) are another type of linguistic resource that has been considered to influence our conceptualization of emotions. According to these cognitive linguists, linguistic metaphors are verbal expressions that depict their target figuratively, thanks to an analogy with something else. For instance, the expression "he's fighting his fears" is a linguistic metaphor that personifies fear as an enemy or opponent. In the Cognitive Metaphor Theory, linguistic metaphors reflect cognitive metaphors, that is, conceptual analogies that are cognitively endorsed by speakers and motivate the creation and use of linguistic metaphors. As pointed out by Murphy (1996), early cognitive linguists themselves did not propose clear models of the cognitive nature and role of metaphors, and therefore did not actually test their cognitive claims empirically. In more recent years, however, many psycholinguistic experimental studies have suggested that conceptual metaphors have some cognitive reality, at least to the extent that a subject's exposure to properties highlighted by metaphors has an impact on their cognitive performances. For instance, speakers of a language that, like English, employs verticality metaphors for power (HIGH IS UP), seem more inclined to judge that someone is powerful if the name appears at the top of a screen than at the bottom (see for instance Landau, Meier, and Kiffer [2010] for a review).

Like many abstract domains, emotions are particularly prone to metaphorical representations in a vast majority of languages across the world if not all of them (Wierzbicka 1999; Kövecses 2005), and some psycholinguistic studies have focused on emotion metaphors. For instance, Williams and Bargh (2008a, 2008b) have shown the influence of physical warmth and distance – metaphorical properties for evaluation and affection in English – on interpersonal emotions and responses. Given this demonstrated effect of the physical properties that ground metaphors in cognitive functions, it seems plausible that the particular range of metaphors available to talk about emotions in one language or another may influence the way speakers construe emotions and from there, the way they understand and manage them (Ponsonnet 2014a: 44–47). To my knowledge, such linguistic-relativity effects upon emotion management have not yet been tested empirically.

3.3.3 Discourse and narratives about emotions

Last but not least, discourse about emotions can also enhance emotional intelligence, and in consequence channel well-being. Some studies have confirmed this effect in the context of child development: Laible and Song (2006), for instance, show that further elaboration

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in caregivers' discourse about emotions can improve emotional and relational understanding in young children. There is also good evidence that for adults as well as children, sharing emotional episodes with others can modify one's emotions. According to Rimé's (2009) meta-analysis on the social sharing of emotions, social sharing can help us resolve negative emotions to the extent that it helps us understand emotions and find strategies to cope with them (Rimé 1993; Kennedy-Moore and Watson 1999). The social sharing of emotions implies constructing narratives and transforming social representations that help absorb further emotional elements (Rimé 2009: 81; Pascuzzi and Smorti 2017). All these benefits can also result from exposure to discussions of emotion in less interactive contexts. For example, reading literature where the emotional states of characters are discussed in minute details may improve emotional intelligence and emotional management (as discussed for instance by Caruso and Salovey [2008], cited in Oatley [2009]).

Thus, whether in child development or in adult life, the way we represent emotions and emotional events in language can influence the way we understand, and subsequently manage, emotions. To that extent, the particular conventions that regulate the elaboration of discourse around emotions in various languages – for instance the literary and poetic genres that have course in a given language – are likely to impact the way emotions are managed, conceptualized, and therefore experienced.

3.4 The social benefits of sharing

In addition to cognitive benefits leading to better emotional management, sharing emotions with others has further social benefits that can, in turn, modify people's emotional experience. According to Rimé (2009), the social benefits of communicating emotions to others operates at two levels. The first, most immediate but also more superficial level, has to do with empathy, affection and other emotional support (see also Clark and Finkel 2004). The relief provided by these responses is only temporary, but more importantly, this enhancement of social bonds at the local level of emotion sharing tends to propagate throughout social networks (because of the secondary sharing of reported emotional experience). Ultimately, emotion sharing consolidates the network itself, which in turn supports the emotional well-being of its members.

Given that, as pointed out by Rimé (2009: 80), all this is achieved "by using language", it seems plausible that the linguistic resources and conventions specific to a given human community may influence the very nature of this community, and the level of emotional care available to its members. Here, not only the descriptive resources (words, see 2.3.1) are likely to have an impact, but also presumably the conventions of discourse, as well as expressive resources (interjections, prosodic contours and the like) – because they partly determine, for instance, which emotional matters can be more vividly shared and thus nurture further empathy and social bond.

3.5 Conclusions on linguistic relativity in psychology

While the expression-discharge folk conception that emotions can be eliminated by expressing them ("getting it off your chest") is not very strongly supported by empirical evi-

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dence, psychologists' models and discussions of emotions do suggest many ways in which language may influence emotional experience, conceptualization and practices. Among plausible paths of emotional linguistic relativity made the most explicit by psychologists are the role of language in shaping conceptualization and experience (e.g. Barrett 2009; Lindquist and Gendron 2013), and in influencing emotional intelligence (Lomas 2016). Another mechanism has to do with the social sharing of emotions, in which linguistic differences may improve emotional intelligence, influence shared representations and practices about emotions, and modify social networks and their caring capacities.

As for the type of linguistic resources involved in these proposed mechanisms, emotion words are the one that psychologists have considered the most explicitly – which is not surprising, given that words are notoriously more accessible to lay-speakers' metalinguistic awareness than any other linguistic resource (2.3.1). Metaphors have also been explicitly considered, as linguistics and psychology tend to work hand-in-hand on this question. In addition, the social sharing of emotions, conventions of discourse (2.3.2) and expressive resources (2.3.1) may play a role as well, but this mostly remains implicit in psychologists' discussions.

In spite of many suggestive studies and models, psychologists rarely discuss emotional linguistic relativity as such. In fact, they hardly consider linguistic diversity altogether – even when they explicitly consider language. Since linguistic research tells us that languages across the world differ greatly in the way they describe and express emotions, it seems that testing psychological models against this linguistic variation would make a lot of sense.

4 Exploring linguistic diversity

Understanding the influence of cross-linguistic variation upon the experience, conceptualization and practices about emotions presupposes that we know how languages across the world describe and express emotions, and to which extent they vary in this respect. Although our knowledge of such matters remains preliminary, linguists have made some significant progress in this direction in the last decades, especially since the 1970s. Based on research efforts in various branches of linguistics, and aided by anthropologists with an interest in language (e.g. Briggs 1970; Howell 1981; Lutz 1982), the range of resources that typically foster descriptions or expressions of emotions across languages is now relatively well established. A non-exhaustive list of the most foundational works would include, among many others: Wierzbicka (1999), Harkins and Wierzbicka (2001) in semantics; Dirven and Niemeier (1997), Athanasiadou and Tabakowska (1998), Senft (1998), Enfield and Wierzbicka (2002b), Novakova and Tutin (2009), Ponsonnet (2014a), Tersis and Boyeldieu (2017) in descriptive and field-based linguistics; Kövecses (2000), Huang (2002), Ponsonnet (2017b) in cognitive linguistics; Blumenthal, Novakova, and Siepmann (2014), Bednarek (2008) in corpus linguistics; Ponsonnet (2018c), Vuillermet (2018) in linguistic typology; Wilce (2009, 2014) in anthropological linguistics. Below I list a selection of these resources, loosely ordered from the most descriptive to the most expressive. Among them, the descriptive resources – higher in the list – are relatively well documented and under-

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stood, while expressive resources – lower in the list – are mostly understudied, in spite of their evident prevalence in language use.

- The lexicon, i.e. emotion words, presumably found in all languages (Wierzbicka 1999: 276).
- Emotion metaphors, including body-based metaphors, also a potential universal (Wierzbicka 1999: 276).
- Grammatical categories and syntactic constructions, for instance apprehensive and desiderative modals (Lichtenberk 1995; Vuillermet 2018), mirative constructions (DeLancey 1997), dative experiencer constructions (Bickel 2001; Hagège 2006), adversive passives (Tokunaga 1988), honorifics (Ochs and Schieffelin 1989), and more. Here the features and their degrees of grammaticalization vary immensely across languages.
- Morphology, in particular evaluative morphology, found in many but not all languages (Grandi and Körtvélyessy 2015; Ponsonnet and Vuillermet 2018; Ponsonnet 2018a).
- Emotive interjections (Ameka 1992; Wilkins 1992; Goddard 2014; Ponsonnet 2022a; *inter alia*), a very plausible universal, but cross-linguistic knowledge about interjections is very limited.
- Prosodic features (Ochs and Schieffelin 1989; Omondi 1997; Ponsonnet 2014a: 127–142), also presumably a universal, but this domain is drastically understudied.

In describing the above resources, linguists have typically sought to identify universal features rather than describe the extent of variation, but obviously the former task also brings the latter result. Because descriptive linguists rarely focus their attention on emotional resources per se (with notable exceptions, see above), a lot of the primary data, as found in grammar monographs for instance, is somewhat cursory. When typological linguists focus on emotions, they typically choose a type of linguistic tool as their starting points – for instance metaphors (Kövecses 2005), evaluative morphology (Ponsonnet 2018a), apprehensives (Lichtenberk 1995; Vuillermet 2018) –, but are then forced to rely upon data and analyses produced with another focus in mind.

A major impediment to the description of emotional language and speech is the difficulty to collect adequate data. Indeed, linguistic data collection usually implies recording speakers, which is obviously very detrimental to spontaneity, and/or to the discussion of many potentially emotional topics in general. In major languages, it is possible to draw from literature or from large digitalized corpora, but this implies studying written registers, where expressive features in particular are drastically altered compared to oral registers. For smaller languages, where linguists collect data directly from speakers "in the field", successful methods have been tested (Ponsonnet 2014b), but they certainly impose dedication and effort.

Given these parameters, the current state of our knowledge about the linguistic encoding of emotions is somewhat erratic. We know quite a lot about certain features like words, metaphors, evaluative morphology or even some relatively rare grammatical constructions (e.g. apprehensive systems, dative experiencer constructions). But we ignore seemingly simple facts such as which emotive interjections a language should be expected to have (Ponsonnet forthcoming), or which emotionally loaded melodic contours are commonly conventionalized across the world. In addition, aspects of emotional language for which

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linguists are capable of outlining a world-wide typological overview including an inventory of possible linguistic profiles and their distributions (for instance, across language families or geographic areas) are few. In other words, we are so far mostly unable to characterize how, say, Indo-European languages of Western Europe, African Bantu languages and Australian Pama-nyungan languages typically describe and express emotions with such or such resource, and compare to each other in this respect. Such characterizations are more or less established, at least for major language families, with respect to other aspects of language (for example, tense and aspect, possession, and many more), and they would certainly constitute a very useful first step in assessing emotional linguistic relativity.

The present section will not attempt to cover the totality of the linguistic research and results about emotional language. This would be too vast, and valuable synthetic publications are already available (Besnier 1990; Wilce 2009; Majid 2012a; Soriano 2013; Blumenthal, Novakova, and Siepmann 2014; and see Foolen [2017] for a historical account of the cross-linguistic study of emotions). Instead, I will present is some details what we know of the best-documented resources – namely the lexicon (4.1), metaphors (4.2) and evaluative morphology (4.3) – highlighting the extent to which this echoes the research in psychology discussed in the previous section. As will be discussed in 4.4, the bulk of expressive resources and discourse conventions relative to emotions, that are much harder to document, have attracted far less attention to date.

4.1 Lexical semantics

Lexical semantics is the study of how meaning is packaged into words, and an important dimension of variation here is how words in different languages divide reality in different ways (Evans 2010: 508–511). To take the concrete domain of body parts as an example, many languages in the world have one single word for 'hand' and 'finger', while many others – like English – have two. Comparable differences apply in the domain of emotions: for instance, in German *Eifersucht* means 'jealous with respect to someone', and *Neid* 'jealous with respect to something', but in English *jealous* applies to both states. Some languages have words for emotions that are not lexicalized (i.e. expressed by a single word) at all in most other languages – among most famous examples are the Japanese *amae*, referring to self-indulging love (Watt Smith 2015), or the Ilongot (Philippines) *liget*, which is a kind of angry energy (Rosaldo 1980; Watt Smith 2015). Generally speaking, emotion lexica can vary significantly in their size and make-up across languages.

Emotion lexica are the dimension of emotional linguistic resources where diversity is the best known and understood. For larger languages, data can simply be extracted from dictionaries. In addition, comprehensive data is available for some smaller languages where emotions have been documented by linguists (e.g. Senft 1998; Ponsonnet 2014a), but also by anthropologists and occasionally by psychologists (see references above and below). Several works by linguists (Wierzbicka 1999; Ogarkova 2013) and by psychologists (Russell 1991; Lomas 2016) have provided reviews and reached a degree of generalization.

The most recent and comprehensive meta-analysis of this material, Ogarkova (2013), is summarized here with some additions. Ogarkova (2013: 50–52) identifies several areas of

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convergence in the way languages lexicalize emotions (i.e. describe emotions with words), namely:

- Most languages have emotion words. Note, however, that the number of emotion words varies enormously, from as low as seven in Chewong (Austroasiatic, Malaysia), according to Howell 1981: 134); to several hundreds (Russell 1991: 428; Ponsonnet 2014a: 146).
- Some emotion categories such as those translated in English by anger, fear/fright, shame/disgrace, and jealousy/envy are most commonly lexicalized.
- Emotion words tend to contrast with one another along similar dimensions across languages, typically intensity, i.e. how strong the emotion is, and valence, i.e. whether it is positive or negative. We may add to Ogarkova's observations that many languages have more words for negative emotions than for positive emotions (Averill 1980).
- Prototype approach studies show that many emotion words in each language sit at the "basic" level of conceptualization. That is, they are the default labels used in ordinary discourse – like the word *dog* or *cat*, contrasting with labels such as *animal* (higher level category or superordinate), *greyhound* or *siamese* (lower level category or subordinate).

Ogarkova (2013: 52) also identified several dimensions of variation. An important one is in whether languages have a superordinate term (or cover term like *emotion* or *feeling* in English) for emotions, and what the scope of this term is. Another dimension concerns which specific terms are available:

- Many languages have emotion words that are absent in most other languages, sometimes called "untranslatable words" (see above).
- In some languages emotions that are commonly lexicalized elsewhere are absent, i.e. they have lexical "gaps" – for instance, Dalabon (Australia, Gunwinyguan) does not have a specific term for pride/proud (Ponsonnet 2014: 203).
- Very commonly, emotion terms across languages partially overlap in meaning, so that they may be good translations of one another in some contexts, but not in others. For instance, 'ashamed' is sometimes a good translation of *sheim* (<Eng. 'shame') in Australian Kriol, but in some contexts *sheim* means 'being afraid of someone', and 'ashamed' is no longer a good translation (Ponsonnet 2020: 50–53).

With respect to these partial overlaps, Ogarkova (2013: 58–59) finds that the nuances most typically relate to what Wierzbicka (1999: chap. 2) has called the emotional scenarios uncovered by a word exact definition, for example:

- The typical antecedents of the emotional events, e.g. the Spanish *verguenza* is more frequently triggered by ridicule than *shame*, its best English equivalent (Hurtado de Mendoza 2008).
- The subjective valence of the emotion, e.g. Chinese has words for 'sad love', i.e. love as a negative emotion (Shaver, Wu, and Schwartz 1992).
- The association of an emotion with physiological symptoms, e.g. Greek *stenahoria* is reported to be typically accompanied by a feeling of suffocation which is not implied by its best English equivalent, *frustration* (Panayiotou 2004).
- The behaviors and interpersonal attitudes typically associated with an emotion. For instance, the Woleanian *song*, which Lutz (1988: 301) describes as a type of anger, is

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typically manifested by withdrawing behaviors (sulking, refusing to eat, suicide attempts).

Another dimension of lexical variation beyond those listed by Ogarkova (2013) has to do with the morphosyntactic status of emotion terms. In some languages, emotion lexica display clear (dis)preference for certain parts of speech: Polish has a large number of emotional adjectives (Dziwirek and Lewandowska-Tomaszczyk 2010); the Gunwinyguan language Dalabon (like most Australian languages) has very few emotion nouns (Ponsonnet 2014a: 150). This has consequences on the syntactic and metaphorical representations of emotions (4.2).

In sum, these preliminary generalizations suggest that although some languages have additional emotion words and others have gaps, overall many emotions tend to be lexicalized in most languages (including some primary emotions such as fear and anger, but also socially complex emotions such as shame or jealousy), albeit with some potential variation in the exact meaning of the corresponding words. Furthermore, the scenarios in which emotion words are embedded (Wierzbicka 1999; Kövecses 2000) indicate variations in the social framing of these emotions, i.e. in moral values and expected behaviors; and finally, the morphosyntactic status of emotion words may imply different types of metaphors.

These foci of lexical variation seem well suited to channel emotional linguistic relativity in the perspective of the psychological hypotheses discussed in Section 3. Variation in lexical categories is plausibly substantial enough to modulate the conceptualization of emotions into different categories and to therefore "glue" emotional experience in different ways (3.2; Barrett 2009; Lindquist and Gendron 2013). In addition, the range of emotion words available in a language, and the metaphors it may support, can plausibly enhance diverse aspects of speakers' emotional intelligence, so that management practices could differ depending on the structure of the lexicon (3.3.1; Lomas 2016). Finally, the nuances in the scenarios conveyed by emotion words are likely to channel subtly different discourse contents, with consequences on the development of emotional intelligence (3.3.3) and the social sharing of emotions (3.4). None of these plausible loci of emotional linguistic relativity have been tested so far, but our current empirical and theoretical knowledge combined would presumably allow researchers across disciplines to do so.

4.2 Figurative representations of emotions

As discussed in 3.3.2, a number of psycholinguistic studies claim that linguistic figurative representations of emotions (i.e. metaphors) correspond to cognitive properties in the brain. If these studies are correct, it seems logical that the speakers of two languages that use different metaphors should be equipped with different cognitive apparatus. To my knowledge, this hypothesis has not been tested so far, at least not with respect to emotion metaphors. Linguists have themselves discussed some more specific linguistic relativity hypotheses along these lines.

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4.2.1 Body-based figurative representations

As observed by Wierzbicka (1999: 276), most and perhaps all languages in the world have some conventionalized expressions that figuratively depict emotions via representations of some (plausible or imaginary) bodily symptoms – as with the English "broken-hearted". These metaphors often originate in felt somatic emotional responses such as accelerated heart-beat or a tensed belly, with additional figurative elaboration (Ponsonnet 2014a: 239–255; Ponsonnet and Laginha 2020). Across languages, abdominal organs such as the heart, the belly and the liver are the most common seats of emotions. In addition, some body parts are regularly associated with certain emotions via expression and behavior: for instance, the eyes with anger (e.g. Tunisian, Maalej 2004), or the hands with generosity (e.g. Burmese, Vittrant 2013); and many body parts attract figurative roles in just a few languages (e.g. the throat in Kaytetye, Pama-nyungan, Australia, Turpin 2002). Work on body-based representations of emotions cover a broad range of languages across most continents (Enfield and Wierzbicka 2002a; Sharifian et al. 2008a). Sharifian et al. (2008b) offer a tentative typology, identifying three patterns: abdocentrism (common in Australia or Oceania, for instance), cardiocentrism (in East Asia in particular) and dualism, combining the heart as a locus of emotions and the head as a locus of cognition (Indo-European languages, languages of North Africa). Ponsonnet and Laginha (2020) and Ponsonnet (2022b) offer systematic typologies for languages of the Australian continent.

The cognitive status of such linguistic associations of body parts with emotions is a matter of debate among linguists themselves. While cognitive linguists at the origin of Cognitive Metaphor Theory (3.3.2) implicitly postulate that linguistically treating a body part – say, the heart – as the seat of emotions implies that speakers endorse corresponding conceptualization of emotions as taking place in/affecting the heart, others have argued that the words for 'heart' may then simply be polysemous, denoting the body part on the one hand, and the seat of emotions on the other. Polysemy has been taken to entail that the association of emotions with the body is simply a linguistic tool with no consequences on the way speakers understand emotional events (Goddard 1996; Enfield 2002b; Ponsonnet 2014c). Ponsonnet (2014a: chap. 7–8) points out that figurative representation can have some currency for speakers without being taken fully "literally". Indeed, Dalabon speakers (Australian, Gunwinyguan) are aware of the linguistic association between emotions and the belly conveyed by their language: they use this association in non-linguistic semiotic practices (e.g. rituals). Yet, this does not necessarily imply that they believe emotions affect the belly. It is also useful to remember that body part terms are subject to rapid semantic change, and in particular adjacent parts or organs are very prone to exchange labels (Wilkins 1996). Therefore, a word that means 'liver' and 'seat of emotions' might have meant 'belly' at the time when the metaphorical expressions came into the language (Ponsonnet and Laginha 2020). Therefore, even when speakers do, synchronically, associate emotions with the body part used in metaphorical expression, such conceptual associations may be relatively versatile rather than deeply culturally entrenched.

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4.2.2 Other emotion metaphors

Apart from body-based tropes, emotions are also often depicted metaphorically as entities independent of the experiencer's body. For instance, the English expression "to fight one's fears" personifies fear as an enemy or opponent, and the "get it off your chest" metaphor associated with the expression-discharge hypothesis (3.1) represents emotion as a foreign entity inside the person. Although less cross-linguistic systematization is available on non-body-based than on body-based emotion metaphors, we owe some comparative generalizations to Kövecses (2005). He highlights strong cross-linguistic convergence for at least two major emotions: happiness (Kövecses 2005: 36), which is often depicted as a large mass of fluid; and anger, which Kövecses (1995, 2005: 68) claims to be (quasi-)universally represented as a fluid under pressure in a container. Anger metaphors have attracted much attention in descriptivist and cross-linguistic studies (see Ponsonnet [2017a: 551] for a review, as well as Ogarkova, Soriano and Gladkova [2016] and Kövecses and Benczes forthcoming for recent developments), with the conclusion that anger metaphors seem to converge across languages more than metaphors for other emotions (Ponsonnet 2017a). This suggests that some emotions apply stronger universal pressures upon their figurative representations than others, but not enough is known about metaphors for emotions other than anger across languages to refine the hypothesis.

Another dimension of cross-linguistic variation in emotion metaphors is the proportion of body-based metaphors versus non-body-based metaphors. The complete absence of body-based figurative representations of emotions in a given language is unattested, but in many languages, body-based tropes are a minority and non-body-based metaphors are prevalent. This is attested in English and many other European languages, as well as in some creoles for instance (Levisen 2016; Ponsonnet 2017b), and may in fact be a prevalent pattern. By contrast, many languages, at least in Asia (e.g. Burmese, Vittrant 2013) and Australia (Turpin 2002; Gaby 2008; Ponsonnet and Laginha 2020) display a large number of body-based representations of emotions. In some of these languages, body-based tropes are the unmarked way, if not the only way, to depict emotions. Ponsonnet (2014a: 295–297) has hypothesized that for instance in languages that have few emotion nouns (see 4.1), the quasi-absence of metaphors where emotions are reified or personified could impact the way speakers are inclined to manage emotions.

4.3 Morphology

Morphology is the study of morphemes, which are the smallest meaningful units in language. A very common type of morpheme is affixes, i.e. devices that can be added at the beginning or end of a word to modify its meaning. For instance, in *unknowingly*, *un-* is a prefix that expresses deprivation, and *-ly* a suffix that produces adverbs. Affixes and other types of bound morphemes are a relatively common way of expressing emotions, and this is one of the types of expressive emotional resource about which we have the most linguistic knowledge so far.

Within emotionally loaded morphology, "evaluative morphology" refers to morphemes that express the speaker's perception of some scalar properties of the referent, as is com-

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monly found across the world's languages (Grandi and Körtvélyessy 2015). These scalar properties often have to do with size, and the morphemes are then called diminutives (*-y* in *kitty*, *-ino* in Italian *raggazo* 'boy' => *raggazino* 'little boy') or augmentatives (e.g. Italian *-one*: *gatto* 'cat' => *gattone* 'big cat'). Diminutives and augmentatives typically express emotions in addition to size. The range of emotions that this covers across languages has been studied in detail in a number of languages for diminutives (see Ponsonnet [2014a: 81] for a non-exhaustive review), leading to tentative typological generalizations (Jurafsky 1996; Ponsonnet 2018a). Ponsonnet's (2018a) preliminary typological study confirms that the range of emotions covered by diminutives across languages is relatively consistent, and that diminutives quasi-universally express affection, endearment and other relatively "mild" positive emotions associated with children. Here a major aspect of cross-linguistic variation is simply whether a language does have evaluative morphology, enabling the morphological expression of this set of "mild" positive emotions, or whether these forms are simply unavailable. In addition, there is some cross-linguistic variation in the way evaluative morphology expresses specific emotions. For instance, compassion is prevalent in diminutives of South American and Australian languages, and sexually oriented love is only attested with diminutives on the African continent, where it is sometimes associated with courteous poetry (see Taine-Cheikh 2018). Comparable observations apply to augmentatives (Grandi 2002; Ponsonnet 2018a), which typically express negative emotions such as disgust or repulsion, but have stronger positive values (admiration and respect) in some languages only. These nuances presumably result in diminutives and augmentatives endorsing relatively different discourse functions in different languages, but this aspect has never been studied in a non-Indo-European language (Dressler and Merlini Barbaresi 1994; Travis 2004).

Beyond evaluative morphology, the diversity of ways in which morphology can express emotions across the world's languages remains largely unknown. Morphemes dedicated to the expression of affection, compassion or contempt are also common, presumably resulting from diminutives and augmentatives having lost their size-related meanings (Rose 2018), but we know very little about the cross-linguistic distribution and semantic variation of these morphemes. The preliminary investigations published in Ponsonnet and Vuillermet (2018) show that morphology can express a broad range of emotions including affection, endearment, annoyance or irritation, contempt, fear and surprise. Sadness is not attested, but the data remains cursory and further investigation is needed.

As seen in 3.4, expressive resources may plausibly enhance the social sharing (primary or secondary) of certain emotions (based on Rimé 2009). Thus, the potential offered by a language to express emotions via morphology – e.g. whether it has evaluative morphology or not, and what emotions these devices cover – could influence the social orientation of a given group towards an emotion or another, which in turn could modify how the members of this group experience and manage this emotion. However, expressive linguistic resources are essentially absent of psychologist's discussions and have been neglected by linguists as well. As a result, aside perhaps from evaluative morphology, we are far from being able to assess emotional linguistic relativity with respect to expressive resources – whether morphological, grammatical, interjective, prosodic or other.

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4.4 Discourse practices

As discussed in 2.3.2, the way we talk about emotions is not governed only by rules of grammar, but also by rules and conventions that guide the way speakers elaborate discourse and communication. It is plausible that if there is any cross-linguistic variation in such rules of usage, this would play a role in emotional linguistic relativity. Indeed, as acknowledged by Rimé (2009: 80), language is the main medium via which emotions are shared, and in turn the extent and mode of social sharing is likely to influence speakers' experience, conceptualization and practices about emotions (3.3.3 and 3.4). For instance, we know that there is variation in the extent to which different language communities may be inclined to share emotions (Briggs 1970; Rosaldo 1980), and this could translate as differences in emotion-management strategies (3.3.3). Besnier (1990: 431–434) offers a review of some of the relevant literature by anthropological linguists. Unfortunately, a lot of the research in this domain has concentrated on relatively autonomous contexts such as rituals and performances, or specific modality such as writing – perhaps because every day conversation it is not easy to document (but see Jefferson 2015). Another problem is, as pointed out by Goodwin and Goodwin (2001) for instance, that expressive features play a crucial role in emotional discourse, and since we also know little about them (4.3), it is even harder to analyse emotional discourse. Researchers working within the Conversation Analysis framework (Sacks, Schegloff, and Jefferson 1974) have applied their methods to conversations about emotions in English and other large languages (Robles and Weatherall 2021), but have not significantly expanded this work to consider linguistic diversity. Anthropological linguists working on emotions have repeatedly emphasized the importance of studying discourse conventions and expressive features (Ochs and Schieffelin 1989; Goodwin and Goodwin 2001; Wilce 2009), and have indeed produced some studies to that effect. While many such studies deal with a handful of major languages (e.g. English, Spanish), other languages are sometimes in focus – for instance Irvine (1990) on Wolof registers and how they index the affective dimension of social differentiations; Kockelman (2003) on emotive interjections in Q'eqchi' Mayan (Kichean branch of the Maya family); Ponsonnet (2018b) on intonation contours in Australian languages of the Gunwinyguan region – to cite just a few. These works offer very welcome glimpses into humans' interactional and communication practices about emotions, but they are yet too rare to allow for significant generalization.

To conclude, we have virtually no idea as to which discourse conventions and practices may be universal, and which may vary across languages. Therefore, although rules and conventions of discourse may very plausibly entail emotional linguistic relativity, further linguistic description is necessary before we can refine and test this hypothesis.

5 Conclusion

The linguistic relativity hypothesis – which postulates that language influences thought (i.e. conceptualization) and practices (i.e. shared habits and behaviors) – branches out to multilayered implications when applied to the semantic domain of emotions. Indeed,

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conceptualization is not the only thing the brain achieves with respect to emotions: we also *experience* them. Therefore, to the question "can the language we speak change the way we think?", a second one should be added: "can the language we speak change the way we feel?". In addition, the way we conceptualize emotions is likely to influence the way we experience them, and our practices and behaviors about emotions are likely to influence our experience as well. Thus, "emotional linguistic relativity" relates to many different hypothetical mechanisms, involving several distinct aspects of language.

Much of the research on emotions in the social sciences (in anthropology and linguistics in particular) has implicitly assumed that language results from, and thus reflects, its speakers' conceptualization and shared practices about emotions. This has allowed researchers to use language as a heuristically valuable "window on emotions" – but meanwhile, emotional linguistic relativity itself has rarely been carefully discussed, let alone tested. This is somewhat surprising, given that several theories of emotions recently developed in psychology do postulate mechanisms that implicitly or explicitly support emotional linguistic relativity. Notable pathways of linguistic influence on emotions identified by psychologists are conceptualization and experience, which may be channelled by linguistic categories; emotional intelligence, which may be enhanced by additional linguistic categories or by certain discourse practices; as well as the social sharing of emotions, which may be shaped by the expressive linguistic resources available to share emotions, as well as by discourse conventions. Many aspects of language are likely to be involved along these pathways: descriptive linguistic resources (i.e. words or metaphors), expressive resources (for instance, diminutives, interjections), and conventions of usage that govern discourse and communication. However, in spite of the support brought to the emotional linguistic relativity hypothesis by their own models, very few psychologists consider cross-linguistic diversity and the emotional linguistic relativity hypothesis as such.

Yet, linguistic research tells us that the semantic domain of emotions offers significant cross-linguistic variation, although we still know relatively little about it. Emotions are a complex semantic domain that recruits across different types of resources and is therefore difficult to document – which may explain why our empirical knowledge in this field remains fragmentary. Nevertheless, linguists have made significant progress on a few aspects. Emotion words have attracted the most attention, and in this domain we know that languages are subject to significant variation (particularly in the social underpinning of emotions), around a common core of commonly lexicalized emotions. Cross-linguistic studies on emotion metaphors suggest that there may be relatively little variation around some emotions like anger, and much more in others. In some other respects our knowledge is far less advanced: our cross-linguistic understanding of most expressive resources (morphology aside) and of discourse practices around emotions remains drastically limited. For instance, we know very little about the scope of cross-linguistic variation in emotive interjections, or in emotional melodic contours.

As it happens, the emotional linguistic resources that are best known from linguistic studies – mostly emotion words and metaphors – are also the ones that psychologists have discussed the most explicitly. It appears that linguists and psychologists are currently in an ideal position to leverage each other's strengths to devise psycholinguistic experiments that can tell us more about the role of lexical and metaphorical cross-linguistic variation

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in shaping emotional experience or in informing emotional intelligence. Thus, with respect to words and metaphors, emotional linguistic relativity can readily be tested. In sum, emotional linguistic relativity presents itself as a promising avenue of interdisciplinary research that should bring many new insights in the near future.

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50 Positive emotions

1 Introduction
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Abstract: This chapter examines the relationship between positive emotions and language, focusing specifically on the value of differentiating among distinct positive affective states (e.g., happiness, pride, gratitude, love, etc.). We describe both basic and constructed models that describe how positive emotions are conceptualized, experienced, and named across cultures. These theories of emotion shed light on the adaptive value of differentiating among distinct positive affective states and suggest this ability may be related to well-being. We then consider the possible implications of cross-cultural variation in the use of positive emotion words by examining research that investigates the number of words that describe positive emotional states and the frequency at which these words are used across languages. Finally, we consider possible future research directions that would further illuminate the connections between language and positive emotions with health and well-being.

1 Introduction

Centuries of psychological research have yielded several theories regarding the experience and recognition of emotions. However, much research has focused primarily on negative emotions such as fear, anger, and sadness, whereas positive psychology has only recently emerged as a scientific discipline. Research conducted over the past few decades has indicated the importance of positive emotions for well-being and resilience. This chapter examines the relationship between positive emotions and language, focusing specifically on the value of differentiating among distinct positive affective states (e.g., happiness, pride, gratitude, love, etc.). We describe both basic and constructed models that detail how positive

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emotions are conceptualized, experienced, and named across cultures. We then consider the implications of cross-cultural linguistic variation in the use of positive emotion words by reviewing the literature on the number of words describing positive emotional states and the frequency at which these words are used across languages. The implications regarding individual differences in positive emotional differentiation are also addressed, discussing both theoretical and empirical research that suggests the ability to differentiate among distinct positive affective states is adaptive and related to well-being. Finally, we consider future research directions that would further illuminate the connections between language and positive emotions as well as their relationships with health and well-being.

2 Early and current models of emotion

The publication of Darwin's *The Expression of the Emotions in Man and Animals* (1872) had a profound effect upon the development of psychology (Lange and James 1922). In *The Emotions*, an influential book authored by Carl Lange and William James, they remind their readers, "the nervous system of every living thing is but a bundle of predispositions to react in particular ways upon the contact of particular features of the environment" (James 1884: 10). This evolutionary perspective on a model of emotion greatly impacted the early theories prominent in psychological literature, yielding the basic model of emotion.

A basic model of emotion affords language a small role in emotional processes. According to this model, language can communicate emotional status (Ekman and Cordaro 2011) though the model does not grant this communication much precision or accuracy. According to the basic model, one can hurt someone else's emotions by speaking to them insensitively (Panksepp 2011). Outside of these interpersonal examples, the basic model says little about how language can affect the actual process of generating emotion (Shariff and Tracy 2011). Despite evidence that suggests a more intimate relationship between language and emotion (e.g., Fontaine, Scherer, and Soriano 2013), many contemporary models are basic models.

According to the basic model of emotion, emotions are considered a physical type of phenomena that are little affected by language, including mental talk (Lindquist, MacCormack, and Shablack 2015). James (1884) follows previous models of standard emotions, maintaining that emotions such as surprise, curiosity, fear, and anger arise from consistent physical and neurological foundations. These foundations and subsequent emotions are considered to be consistent across cultures and languages. James believed these emotions to be "strongly characterized both from within and without" by a universal "natural language" (James 1884: 8) that transcends geographic and lingual boundaries. He posits that the natural way of "thinking about these standard emotions is that the mental perception of some fact excites the mental affection called the emotion, and that this latter state of mind gives rise to the bodily expression" (James 1884: 189).

James (1884) also argues the variety of physiological sensations we feel is varied enough to constitute all emotions. The James-Lange theory provides the premise of the basic model of emotion and proposes the "bodily changes follow directly the perception of

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the exciting fact, and that our feeling of the same changes as they occur is the emotion" (James 1884: 8). One century later, Ekman (1992) suggested another argument for the fundamentally physiological nature of emotion. Ekman proposed emotions were not only manifest in bodily expressions, but also in facial expressions. According to Ekman, facial expressions universally represent the presence of the basic emotions outlined in the James-Lange theory, providing a foundation for people to communicate their emotions to others through their body language.

In contrast to more biologically based models of emotion, the constructed model of emotion builds upon findings that incorporate linguistic elements into the subjective emotional experience. Schachter and Singer (1962) used empirical research to test the validity of James' theory; their work reiterates James' (1890) central idea that "the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur is the emotion" (James 1890: 449). The attempts to validate James' theory led the researchers to reevaluate the theory itself:

> The results, in these early days, were almost uniformly negative. All of the emotional states experimentally manipulated were characterized by a general pattern of excitation of the sympathetic nervous system but there appeared to be no clear-cut physiological discriminators of the various emotions. (Schachter and Singer 1962: 379)

The lack of validity in comparing physiological states to subjective emotional states across individuals led Ruckmick (1936), Hunt, Cole, and Reis (1958), Schachter (1959) and others to consider the influence of cognitive factors in the delineation of emotional states from physiological experience.

More recently, Barrett has offered a new perspective on emotion, proposing that emotion is not a simple reflex that is hardwired into the brain and body; rather, it is an experience of categorization, guided by one's embodied knowledge of emotion (Barrett 2006). This constructed model suggests the experience of an emotion is a combination of internal sensations, reactions to our environments, personal experience, learning, and culture. According to this theory, emotion-related cognitions shed light on the physiological sensation in the body (Barrett 2014).

The psychological constructionist model values language as a fundamental distinguishing element in the experience of emotion, suggesting that language helps people to identify emotional concepts from embodied experiences and guides the "ongoing processing of sensory information from the body and world to create emotional experiences and perceptions" (Lindquist, MacCormack, and Shablack 2015: 1). According to Barrett (2017) simple emotions begin from a process known as interoception, which refers to the ongoing perception of internal conditions like "sensations from internal organs and tissues, the hormones in your blood, and your immune system" (Barrett 2017: 56) and language plays an important role in labelling emotions in the context of one's physiological sensations, current surroundings, and past experiences.

According to this constructionist theory, affect is a felt sense of experience based on several factors with various valances and arousal levels and is the general foundation for emotional experience, which is labeled by and dependent on language and concepts. In contrast to early research and philosophy about emotion, contemporary science provides

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more complex models of emotion that incorporate not only physiology but also language, cognition, and past experience.

3 Cultural differences in emotional experience and labeling

Basic models of emotion assert that culture plays a supporting role; emotion is innate and as such, is universally equal across the human experience (Ekman 1984, 1992, 1999). In his classic cross-cultural studies of emotion, Ekman (1970) found evidence to support the basic model, finding six basic emotions that were universally recognizable, even in virtually isolated, non-Western cultures. Subjects were presented with photographs of Caucasian facial expressions and were asked to select the emotion term that best matched the emotion expressed in the photograph. Individuals across both Western and non-Western cultures were able to consistently identify the same six emotions: anger, disgust, happiness, sadness, surprise, and fear. These findings were replicated through a variety of further studies by Ekman and other researchers and were expanded upon to show the basic emotions are not only recognizable, but are also rooted in specific physiology and antecedent events (Ekman 1999).

Recent analyses of other representations of emotion beyond facial expression, such as gesture and language, have been interpreted to indicate emotion is not as universal as the basic theory assumes (Barrett 2006). When we experience the sensation of an emotion, we utilize the models of emotion we have constructed in our minds to label the event. As such, the experience of emotion is not a "one-size-fits-all" phenomena, but rather an experience that differs from person to person and even from culture to culture (Gendron et al. 2014). To test the validity of her criticisms to Ekman's theory, Barrett replicated Ekman's study, with some methodological improvement. Using a similar sample of individuals from an isolated culture, researchers gave participants a stack of photos of the six basic emotions and asked them to categorize the photos, with no suggestion of using certain emotion categories (Gendron et al. 2014). Barrett found that the distinct six emotions did not emerge as robustly as in the original study. The grouping of these facial expressions differed from person to person, showing that the lines of distinction between the specific, basic emotions were less definite than they were previously considered to be (Gendron et al. 2014).

It is important to mention that relying on the study of how people label emotions may be insufficient to understand how people experience emotions they feel. Language is a representation of objects and concepts, and the relationships between objects and concepts and the words that describe them do not have ratios of 1:1. One object or concept often has many labels and labels often have many possible meanings. Relevance theory attempts to explain the fact that when humans speak, much more information is generally conveyed in speech than what the speech means in a literal sense. Sperber and Wilson (1998) suggest that there are more "stable and communicable" concepts in our minds than there are words in the language – or languages – we speak, and that "the concept communicated by use of a word on a given occasion may go well beyond the concept encoded" (Sperber and

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Wilson 1998: 184). The authors argue context is what mediates the relationship between the message and what the receiver of the message hears, and ultimately, the effect of the message on the receiver.

This pragmatic theory calls into question the assumption that those who label emotions similarly have the same emotional experience and those that label them differently have distinct emotional experiences. Therefore, what Barrett's constructed model of emotion could suggest is that different emotions are not necessarily qualitatively different states across individuals; what differs, rather, is how individuals interpret these emotional states (Gendron et al. 2014). Some individuals make clear categorical distinctions when assessing their emotions, while others describe them using a more global perspective. This capacity for differentiating emotions with greater specificity is called emotional granularity (Smidt and Suvak 2015; Barrett 2004; Tugade, Fredrickson, and Barrett 2004; Tan, Wachsmuth, and Tugade 2022). Individuals with high emotional granularity can discriminate emotions that fall within the same valence and arousal and then label these experiences with distinct emotion words. Thus, differences in emotional differentiation may not necessarily reflect differences in experience, but rather differences in categorization. If our environment, experiences, and culture, as Barrett proposes, play a role in determining how we interpret our emotions, then language – an integral part of all three – may be particularly revealing. When the relationship between language and emotion is more carefully considered, it appears that while general categories of emotion may be considered universal to some extent, there are meaningful differences in the language used to differentiate among specific emotional states (Oatley and Johnson-Laird 1987).

Unfortunately, the body of research addressing cross-cultural differences in linguistic expression of positive emotion is limited. Recently, researchers have taken the initiative to begin to bridge this gap in the positive emotion literature, with the primary contributor being the Positive Lexicography Project led by psychologist Tim Lomas (2016). The Positive Lexicography Project aims to identify and catalogue cross-cultural differences in positive lexicography. Different languages linguistically recognize different positive emotions. The disparities in the differentiation of positive emotions reflect not only linguistic differences, but also differences in how individuals perceive, engage with, and react to the world. As a result, the Positive Lexicography Project has greater implications than simply assessing variations in lexicon. These differences in distinction are indicative of differences in the ways in which well-being is conceptualized by individuals across cultures (Lomas 2016). By categorizing these positive emotional differences, Lomas's project provides a glimpse into cultural differences in constructions of well-being.

The Positive Lexicography Project functions as an interactive, evolving index of untranslatable words related to well-being. In the context of his Lexicography project, Lomas defines an untranslatable word as one that lacks an exact equivalent in another language (Lomas 2018). The index encompasses over 200 distinct words across nearly 100 languages. Each untranslatable word is content coded and classified in reference to a variety of themes. This thematic analysis categorizes each word as belonging to one of six groups: strictly positive feelings, complex feelings, intimate relationships, prosocial relationships, character: resources, or character: spirituality. These themes are further deconstructed into subcategories, grouping together words that address related phenomena (Lomas 2016).

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This hierarchical quality of the Positive Lexicography Project has allowed for a better understanding of where exactly the discrepancies in emotional language lie. Mapping out the relative domains that these untranslatable words fall under allows for an enriched understanding of exactly how positive emotional experiences vary across cultures. When a language or culture deems a particular emotional state worthy of its own distinct label, this could indicate the importance this specific emotional experience holds in the lives of those within that culture (Lomas 2016, 2018). Alternatively, these differences in emotional language may highlight how the frequency of certain emotion experiences differs from culture to culture. In either case, this naming would provide insight into how the individuals within a certain culture or who speak a particular language may distinctly experience and view the world, especially in terms of emotion.

By enriching our understanding of how positive emotions and well-being are conceptualized within and across different cultures, sharing this index of lexical curiosities internationally could serve to expand the emotional vocabulary of speakers of all languages. A significant body of research has linked positive emotional granularity with psychological well-being (Kirby et al. 2014), suggesting that having the ability to differentiate among positive affective experiences increases overall emotional well-being. Lomas has found some initial evidence of this cross-cultural assimilation of different positive emotional words. Dubbed "loanwords", this act of assimilation occurs when individuals are introduced to an untranslatable word; rather than settling for a near-equivalent word in their native language, the untranslatable word is adopted as their own, allowing for greater emotional intelligence and a richer, more nuanced emotional life (Lomas 2016: 285).

The Positive Lexicography Project has been at the forefront of identifying cross-cultural differences in emotional language and experience, but leaves a critical question unaddressed: Why do these cross-cultural differences regarding emotional conceptualization and description arise in the first place? It has been proposed that differences in positive emotional expression may be rooted in cross-cultural differences in how the self is viewed. These theories often take the form of simple cultural dichotomies, for example contrasting East versus West and interdependence versus independence. Markus and Kitayama (1991, 2010) have argued those in differing cultures exhibit notably different construals of the self, of others, and of the relationship between the self and others. These construals can impact, or even determine, the ways in which an individual experiences the world, influencing cognition, emotion, and motivation. This theory posits that in the East, the concept of the self is rooted in conceptions of individuality that emphasize the necessity of the relatedness of individuals to each other (Markus and Kitayama 1991). This Eastern view underscores the importance of attending to others, belonging to the group, and finding harmonious interdependence with others. In the West, however, such an overt and effortful connectedness is not as highly valued. Instead, Western views of the self are grounded in a tendency to seek and to maintain independence from others; this independence is achieved by primarily attending to the self and by discovering, expressing, and emphasizing the attributes that make the self unique, and thus, differentiated from others (Markus and Kitayama 1991, 2010).

The differences in self-conceptualization according to cultural orientation – an inclination to act, think, or feel a certain way due to one's culture (Knight, Safa, and White 2018) –

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produce noticeable contrasts in cross-cultural conceptions of emotional positivity. When an affective experience is viewed as directly related to the self, the outcome of this experience will depend on the nature of the self-construal (Aaker and Williams 1998). Put broadly, these different construals of the self produce strikingly different goals of positive affective experiences. An interdependent self-construal leads individuals to conceptualize positive emotional experiences as those that generate harmony: a sense of peace and contentment within the larger group, which in turn generates other positive emotions downstream (Ip 2014). An independent self-construal leads individuals to conceptualize positive emotional experiences as those that highlight individuality. As a result, emotional experiences can be broken down into two very different categories that depend at least partially on whether one's cultural orientation emphasizes interdependent or independent views of the self.

The first category of emotions in this theoretical dichotomy are termed "ego-focused emotions" (Markus and Kitayama 1991: 235). In this category of emotional experiences, the individual's internal attributes – their unique personal qualities such as their needs, goals, desires, or abilities – serve as the primary emotional reference point, meaning these qualities determine what experiences, events, or situations evoke positive affect. The most obvious example of an ego-focused emotion is pride. When an individual feels proud, they are experiencing positive feelings such as satisfaction or pleasure due to their own achievements. Importantly, an individual's self-standards for achievement are determined by their internal attributes. An amateur golfer who practices once a week may feel a great sense of pride after placing second in a local tournament, but it's likely Tiger Woods would not feel a similar sense of pride for the same accomplishment. Similarly, when we feel happiness or joy is determined by our personal interests and desires, and who or what we care about most. Ego-focused emotions highlight who we are as individuals; they allow us to celebrate what makes us unique. According to Markus and Kitayama (1991: 235), independent selves must be "experts" in the experience and expression of these emotions, as they maintain, affirm, and bolster the construal of the self as an autonomous, unique entity. Interdependent selves, however, are at odds with these emotional experiences; public displays of internal attributes can lead to confrontation, conflict, or even aggression and thus disrupt their goal of harmony with the larger group. Interdependent selves are motivated by a desire to fit in and be accepted by those around them. Ego-focused emotions, however, put these goals in jeopardy by highlighting what makes an individual different from others. As such, these ego-focused positive emotions elicit ambivalence in those possessing an interdependent self-view (Aaker and Williams 1998).

"Other-focused emotions", the second category of positive emotional experiences, emerge when individuals are sensitive to the "other", engage in perspective taking, and attempt to promote interdependence (Markus and Kitayama 1991: 235). These emotions emphasize the individual's relatedness and facilitate the reciprocal exchange of prosocial actions, thus providing significant self-validation for interdependent selves. Interdependent selves must be the "experts" in the experience and expression of these emotions, as they contribute to the construal of the self as an interdependent entity. Contrastingly, the independent self is at odds with these other-focused experiences. By shifting the focus outside of the self, these emotions discourage the expression of the individual's internal attributes, resulting in inhibition and ambivalence (Aaker and Williams 1998).

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Not only does our self-view determine how we experience certain emotions, but it determines when and how often we experience certain emotions. Markus and Kitayama (1991) assert that we attend more to the emotions that match our self-view. In turn, those who possess an independent self-view experience ego-focused emotions more frequently, while those possessing an interdependent self-view experience other-focused emotions more frequently. In addition, it has been hypothesized that cultural orientation can influence the accessibility of ego-focused versus other-focused emotions; culturally relevant emotions are often easier to discern than those that are less culturally relevant, as there is a larger and more established presence of cognitive categories that can be used to assess them (Markus, Smith, and Moreland 1985). During the appraisal process of emotional experience, the aspects of an experience that deem it emotionally relevant are recognized automatically. Culturally derived knowledge structures are utilized in this implicit process and these structures emphasize certain culturally relevant domains of concern, and thus determine the degree to which specific emotions are accessible (Lazarus 1982).

Differences in the frequency, or the accessibility, of certain emotional experiences could serve as a potential explanation for the differences in emotional language across cultures; the more frequently an emotion is experienced in a certain culture, the more necessary and useful an identifier for that experience would be. The thematization of the Positive Lexicography Project may lend support to this theory. In the project, unique emotional words are differentiated based on categories that reflect this interdependent-independent distinction. For example, the project contrasts "intimate relationships" and "prosocial relationships" (describing other-focused emotions) with "character: resources" and "character: spirituality" (describing ego-focused emotions) (Lomas n. d.). Further analysis may reveal that untranslatable words that fall under the other-focused categories may generally arise within cultures that emphasize an interdependent self-view, with the opposite being true for the untranslatable words that fall under the ego-focused categories.

Another cross-cultural approach to studying the relationship between emotion and language is through multilingual studies. Bilingual or multilingual studies can shed light on potential cultural differences in how emotions are conceptualized, experienced, and named. Such research has, to some degree, examined positive and negative emotion words separately, which is clearly important given the empirical and theoretical work discussed thus far. Research has consistently shown that people who are bilingual often describe their first language as more emotional than their second language (Altarriba and Santiago-Rivera 1994; Anooshian and Hertel 1994; Santiago-Rivera and Altarriba 2002), and psychophysiological research has supported such phenomenological findings: Harris (2004) found autonomic arousal (e.g., skin conductance ratings) responses are stronger to reprimands presented in Spanish to Spanish-English bilinguals for whom Spanish was their first language. Kazanas and Altarriba (2016) looked at the difference in word processing times between emotion words – those that directly refer to an emotional state (e.g., sadness) – and emotion-laden words – those that have come to elicit an emotion (e.g., butterfly) – in addition to considering how valence of those words (positive vs. negative) affected response times. The researchers found when Spanish-English bilinguals performed a lexical decision task, they had significantly faster response times to emotion words compared to emotion-laden words, but only in English. Given that for the majority of the participants, English

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was their dominant language, these findings suggest the distinction between emotion word processing and emotion-laden word processing may be stronger in a person's dominant language. Furthermore, the authors found the effect was especially pronounced when comparing positive words to negative words. Although the Spanish task and English task produced slightly different results (in the English version the response times were fastest for the positive emotion words and slowest for the negative emotion-laden words, whereas for the Spanish version the fastest response times were to the positive emotion-laden words and slowest to the negative emotion words), these findings show the overall main effect of valence, with faster response times to positive words than negative words. The authors do not discuss theoretical possibilities for why such a distinction may exist, therefore the difference in emotion word processing between positively and negatively valenced words should be further explored.

4 Individual differences in emotional differentiation

Leading theorists of emotion (e.g., Ekman 1984; Frijda 1986; Izard 1977; Lazarus 1991; Plutchik 1980) generally agree that emotions are adaptive responses to the perceived environmental demands confronting an individual which then function to inform self-regulation (e.g., Frijda and Swagerman 1987; Simon 1967). The adaptive model of emotion maintains that emotions function to prepare a person to respond to his or her surroundings. This model describes a process of emotional appraisal, experience, and then subsequent action. Firstly, the emotion calls a person's attention to his or her circumstances. Secondly, the specific emotion that is experienced communicates important information about those circumstances. Finally, the specific emotion that is felt also provides motivational urges and physiological changes that allow the person to respond adaptively to the situation. Kirby et al. (2014) assert that if it is agreed that emotion plays an important role in self-regulation, then "individuals who are better able to identify and interpret the signals provided by emotions (high differentiators) should be adaptationally advantaged relative to individuals who are less able to identify and interpret these signals (low differentiators)" (Kirby et al. 2014: 242). The authors suggest the empirical research on those who are high differentiators (those high in emotional intelligence) and on those who are low differentiators (those with alexithymia, or an inability to identify one's emotions) support this theoretical conjecture.

The literature thus far has indicated that having the ability to understand, perceive, and effectively manage emotions is strongly related to psychological well-being and physical health; that is, emotional granularity is not only an important component of general psychological well-being, but may also serve as a protective factor against psychopathology. Individuals with alexithymia experience a variety of psychological, interpersonal, and physical difficulties such as increased risk for depression and difficulty handling interpersonal conflict and emotionally tense situations (Lumley 2004; Sifneos 1972; Taylor and Bagby 2004; Vanheule et al. 2010). Alexithymia has even been related to increased risk for early death (Kauhanen et al. 1996). The psychopathology and social and psychological difficulties associated with alexithymia suggest the abilities to identify and distinguish among emotions serve important social, psychological, and physical functions.

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Many people with disorders such as depression, anxiety, substance use, and eating disorders have difficulty regulating their emotions (Sheppes, Suri, and Gross 2015; Sloan et al. 2017). While some emotional dysregulation is due to a lack of effective coping skills, recent research suggests that emotion differentiation is an important tool for not only identifying but also regulating emotions (Kirby et al. 2014). For example, the association between linguistic style and psychopathology has been studied in survivors of trauma. Lorenz and Meston (2012) conducted a study in which a group of adult women who had experienced childhood sexual abuse completed a neutral writing sample about events that had happened to them in the past day and another writing sample about their feelings and experiences with sex and sexuality. Compared to a group of women who had not experienced sexual abuse, women with abuse histories used fewer positive emotion words in both samples and they used more negative emotion words in the sexuality writing sample than in the neutral writing sample. Participants across groups with a history of psychiatric illness used more negative emotion words in the sexuality writing sample, although whether this relationship is causal or not cannot be indicated by this study. Pulverman, Lorenz, and Meston (2015) expanded on this study by examining baseline and post-treatment linguistic differences in female survivors of childhood sexual abuse. After completing an expressive writing treatment, reduction in the word "I" and negative emotion words predicted decreased sexual dysfunction and depression symptoms, as did an increase in positive emotion words. Additionally, Reddy et al. (2015) conducted a cross-sectional study asking undergraduate women at a large university that had recently experienced a mass shooting to write about the event and how it made them feel. The researchers found positive emotion word usage was negatively correlated with post-traumatic stress symptoms; again, the degree to which this relationship is causal, or the direction of the causality, is not indicated by the study. One potential theoretical explanation based on the work of Kirby et al. (2014) is that being able to name and describe one's positive emotions could be an important way to reap the benefits of such emotions for psychological well-being and resilience.

Conversely, research has shown people who are better at differentiating their emotional states are also better able to regulate their emotions and often experience higher levels of well-being. For example, research has found consistent support for a strong association between emotional intelligence and indicators of mental and physical health. Emotional intelligence describes the ability to perceive, understand, use, and regulate emotions (Mayer and Salovey 1997; Mayer, Salovey, and Caruso 2002). For example, scores on the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer and Salovey 1997) are positively related to several aspects of psychological well-being (Ryff 1989), such as mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Brackett and Mayer 2003). There is also evidence that emotional intelligence acts as a protective factor against stress, based on research showing that emotional intelligence is inversely related to stress (Görgens-Ekermans and Brand 2012) and that emotional intelligence can inhibit mood deterioration when one is faced with difficult circumstances (Mikolajczak et al. 2009). Furthermore, researchers have found measurable behavioral differences between individuals who differentiate among the specific negative emotions they experience. For example, underage social drinkers who reported more differentiated negative emotional experiences were found to consume less alcohol in response to intense negative emo-

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tions than did those who reported less differentiation among their negative emotional experiences (Kashdan et al. 2010).

While there is a large amount of literature showing the beneficial outcomes of differentiating among different negative emotional experiences, or emotional experiences in general, Kirby et al. (2014) point out there has been much less attention given to the relationship between well-being and the ability to differentiate among positive emotional states, despite such a strong theoretical justification for such research. Firstly, positive emotions have been found to serve appetitive functions such as rewarding successes and promoting persistence through challenges. Secondly, empirical research has shown humans experience a large range of positive emotions, serving a variety of purposes; for example, happiness, hope, gratitude, pride, and love, and each of these may serve distinctive adaptational functions (e.g., Griskevicius, Shiota, and Nowlis 2010; Keltner and Haidt 2003; Smith 1991). Thirdly, there is evidence that the ability to differentiate among positive emotions is distinct from ability to differentiate among negative emotions, and that these two abilities have different evolutionary functions.

Negative emotions often promote adaptive responses in crisis situations, whereas positive emotions may have long-lasting consequences that provide long term survival benefits. Frederickson's (1998, 2001) broaden-and-build theory of positive emotion posits that positive emotions serve to "broaden people's momentary thought-action repertoires and build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources" (Frederickson 2001: 219). Notably, research has shown that positive emotions play an important role in the management of negative emotions and can help to speed up recovery from negative emotions (Fredrickson and Levenson 1998; Fredrickson et al. 2000). In response to the evidence that suggests positive emotions cooccur with negative emotions during intensely stressful situations, Folkman (1997) developed a revised theory of stress and coping. Similar to Fredrickson and Levenson's (1998) concept of "undoing", Folkman posits that positive emotions play an important role in deescalating psychological and physiological feelings of stress after the stressor is no longer present and also aid in building long-term emotional resiliency.

Kirby et al. (2014) review the relatively small amount of empirical research that considers the benefits of differentiating among positive emotions specifically. For example, Barrett et al. (2001) considered both positive and negative emotions as they examined the relationship between emotional differentiation and emotional regulation. While they found the ability to differentiate among negative emotions was associated with having a broader range of emotional regulation strategies, they did not find this relationship held for positive emotions. That is, they did not find that differentiation among positive emotions predicted the use of regulation strategies for managing positive emotions. The authors hypothesized this discrepancy between the effects of differentiation among positive emotions and the effects of differentiation among negative emotions occurred because positive emotions require less regulation than negative ones. However, the authors did not consider how differentiating among positive emotions may relate to emotional regulation of negative emotions. Frederickson's (1998, 2001) broaden-and-build theory of positive emotion and Folkman's (1997) revised model of stress and coping both lend support for the theory that the ability to differentiate among positive emotions may be associated with the ability to

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regulate negative emotions. Despite the scarcity of research considering differentiation among positive emotions, the small amount of empirical research and theoretical work that has been completed strongly indicates there is a relationship between well-being (both psychological and physical) and emotional differentiation among both positive and negative emotions. Moreover, the available literature suggests these relationships are likely distinct and different from each other.

5 Future directions

Despite the large body of research regarding emotional experiences, there are many avenues within this rich topic which have not yet been fully explored. For example, Schachter and Singer (1962) suggest that the physiological components of strong emotions are identical and that differentiation of specific emotions occurs during the cognitive process of labeling. Yet little attention has been paid to the possible physiological differences between the experience of positive and negative emotions. The competing evidence and research regarding the classical and constructed models of emotion provides another clear path for future research, especially as researchers continue to search for physiological markers of specific emotions. As recognized in the constructed model, it is possible cultural and ecological factors impact the development of the brain and therefore play a significant role in the experience of emotions as well as the language through which these experiences are understood.

Given the strong impact of language on the experience of emotions discussed previously in this chapter, more research examining the nature and extent of this relationship is needed. In particular, the implications of cultural and lexical differences in labelling emotions should be examined. It is still unclear how these differences affect the way individuals perceive and understand their emotions and whether cross-cultural research is effective in analyzing these differences. The Positive Lexicography Project revealed the number of emotion words is not consistent across different languages, nor do corresponding emotion words always have identical meanings (Lomas 2016). More research is needed to determine whether these fine-grained differences in positive emotion recognition lead to measurable differences in overall well-being on both individual and cultural levels. It is possible that both past and current cross-cultural emotion research, much of which has been conducted by researchers who hold Western cultural perspectives, loses valuable data in the process of translating languages. To broaden the cultural context of this research, future researchers in this field should seek to collaborate with psychologists and linguists from the countries they plan to study.

Another promising area for future study considers the effect of bilingualism on emotional understanding, brain health, and overall cognition. Fluency in multiple languages is correlated with increased brain health including delayed development of Alzheimer's Disease (Schweizer et al. 2012). Yet more research is necessary to understand exactly how bilingualism and monolingualism differ in terms of lived emotional experiences. As noted earlier, bilingual speakers process positive and negatively valenced words differently depending on whether they are in their first or second language, but few theoretical models explain why this effect occurs. Perhaps those who speak multiple languages consequently

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develop larger emotional vocabularies, which might point to differences in emotional granularity. Considering both early and current research on emotion, language clearly plays an important role in identifying and differentiating among emotions, but additional studies are necessary to better understand how emotional words – some of which may only exist in one language and not another – can affect one's understanding and experience of emotion. Future studies should examine the relationships between emotional words and emotional experience on both individual levels and cultural levels and should explore how individual emotional experiences relate to the cross-cultural differences that have been studied thus far.

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51 Negative emotions

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Abstract: Drawing on an interdisciplinary lens, this chapter aims to explain how negative emotions are perceived across different cultures and how negative emotions are constructed and expressed through language, in particular, narratives. The chapter begins with a description of negative emotions and continues with a discussion of how members of certain cultural communities or societies are socialized, through culture, language, and discourse, into constructing, displaying, regulating, and interpreting negative emotions. The chapter also discusses how bi/multilingual individuals express negative emotions, how negative emotions affect second/foreign language learning and use, and what narratives that display negative emotions look like.

1 Introduction

Given the strong link of negative emotions to one's well-being, identities, decision-making, language use, social relationships and interactions, and overall functioning in life, it is not surprising that the topic of negative emotions has a long history of scholarship that draws upon numerous disciplines, including but not limited to psychology, philosophy, neuroscience, linguistics, education, and anthropology. The studies have typically analyzed one single negative emotion, such as *anxiety*, or a cluster of emotions in relation to a certain outcome (e.g., the role of anxiety in school performance) using a wide array of research methodologies, but mostly surveys and self-reports in the form of narratives. This cross-disciplinary research has advanced our understanding of negative emotions across different settings and contexts.

This chapter focuses on the relationships among negative emotions, language, and culture. It first defines negative emotions and briefly describes the characteristics of those. It then offers a discussion of the role of culture and cultural background in the construction and expression of negative emotions. A major line of research within the literature on negative emotions is concerned with the display of negative emotions in and through language. Drawing from this particular literature, the chapter explains how negative emotions are

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constructed, negotiated, and expressed in and through discourse, in particular, narratives. The content in the final section is centered around the link between bi/multilingualism and negative emotions. As many parts of the world become more linguistically diverse, it is not surprising that this particular area of the negative emotions literature is rapidly growing and thus worth the attention in this chapter.

2 Defining negative emotions

What gets considered negative or positive and what emotions fall under negative emotions category have led to fruitful discussions and conceptualizations over decades. A number of scholars have challenged the dualism (negative vs. positive) of emotions. Solomon and Stone (2002) capitalize on the multidimensional nature of emotions and argue that "by forcing the experience of emotion into such categorical boxes, researchers may be ignoring or misrepresenting the complexity and subtlety of the richness of human emotional life" (Solomon and Stone 2002: 417).

Kristjánsson (2003) almost completely rejects the negative versus positive emotion dualism:

> There are no emotions around to which we can helpfully refer collectively as "negative," although there are of course painful emotions, emotions that incorporate negative evaluations of states of affairs, emotions that are negatively morally evaluated, and so forth. To put it bluntly, there is no such thing as a negative emotion. Furthermore, while genuine attempts are under way to reappraise various (commonly) negatively evaluated emotions, those attempts involve different kinds of strategies which cannot and should not – either logically and morally – be collected together under one single label. (Kristjánsson 2003: 362)

My goal in this chapter is not to challenge different perspectives or refute certain arguments in defining or describing what negative emotions are or are not. Yet, it is important to recognize that the emotionality research has typically grown out of the dualism of emotions, no matter how simplistic or problematic it might be for some. Emotions have been categorized in various other ways across different disciplines and scholars, but according to MacIntyre and Vincze (2017), "perhaps the single most powerful way to separate emotion schemas is to categorize them as positive or negative felt emotions" (MacIntyre and Vincze 2017: 65). This binary categorization "reflects the vernacular usage of the terms, that is, whether the emotion is pleasant or unpleasant, welcome or unwelcome" (MacIntyre and Vincze 2017: 65). Negative emotions are typically regarded as unpleasant and therefore not valued in certain cultures. These varied and diverse emotions, such as *anxiety, anger, envy, sadness, disgust, shame, frustration, confusion, guilt, hate,* and *hopelessness*, among others, are "thought to be unhelpful and best avoided" (Parrott 2014: 273). Negative emotions also typically "take over conscious experience – they cannot easily be ignored" (MacIntyre and Vincze 2017: 61). Especially when these emotions are intense and prolonged, they may result in a variety of problems or issues, such as aggression and violence, depression, suicide, or anxiety disorders. Indeed, the study of negative emotions has historically focused on the dysfunctionality of them, as experts and psychologists have aimed to help promote

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mental health and well-being and relieve human suffering. Nevertheless, negative emotions can also be positively functional and help achieve certain goals by guiding thoughts and actions. For example, out of fear of failing a class, a student may choose to study harder for a final exam over completely withdrawing. Prior (2016) also cautions against expressing value judgements and suggests that "there may be times when it is normatively 'good' to be *sad* and 'bad' to be *happy* (e.g., at a funeral)" (Prior 2016: 179–180, original emphasis). While an *action tendency* along with a negative emotion may be common, the desire or urge to act does not mean that a certain negative emotion leads to a certain action or behavior. While anger is typically linked with an urge to attack, for example, that is obviously not a fixed causation. Individuals may experience negative emotions differently "because they generate qualitatively different types of feelings, and because they serve different functions" (MacIntyre and Vincze 2017: 65).

3 Negative emotions and culture

The way a negative emotion will function depends on a variety of factors, including the social context and culture. In cultural psychology approaches, negative emotions, like any other kind of emotion, are not only cognitive responses to stimuli, but they are socioculturally constructed. The individual agency in displaying or regulating negative emotions is culturally mediated to varying degrees. In other words, how individuals understand, display, or regulate negative emotions is usually consistent with the cultural norms or sociocultural forces of the environment that individuals are part of. Therefore, experiences, morality, and understandings associated with negative emotions are not homogenous across cultures. As Parrott argues, "different emotions don't necessarily work the same way in one culture as they do in another" (Parrott 2014: 277). For example, Chentsova-Dutton, Senft, and Ryder (2014) state that while European-American contexts may label negative emotions as undesirable and inappropriate, East Asian contexts are less likely to do so. They further argue that "negative emotions may also function differently in cultural contexts that tolerate or encourage negativity" (Chentsova-Dutton, Senft, and Ryder 2014: 150) and may "have different consequences in different cultural contexts" (Chentsova-Dutton, Senft, and Ryder 2014: 154).

Previous cross-cultural research has focused on the link between cultural context and emotional experience through comparison of the collective experiences or reflections of two or more cultural groups. While one should approach this type of comparison with caution, because the focus is on the collective experience and the individual experience typically gets lost in analysis, the existing cross-cultural research still offers strong empirical evidence for the significant role the cultural context or background plays in emotionality. For example, Mesquita, Boiger, and De Leersnyder (2017) compared the experiences of American college students to those of the Japanese in understanding their interpretations of the emotions felt during a 14-day experiment. The participants rated their experience on a list of different emotions, which the researchers categorized into four groups: "positive engaging emotions (e.g., friendly feelings), positive disengaging emotions (e.g., pride), negative engaging emotions (e.g., shame), and negative disengaging emotions (e.g., an-

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ger)" (Mesquita, Boiger, and De Leersnyder 2017: 100). The researchers made two predictions:

1. Disengaging emotions (such as pride and anger) would be more prevalent in North American contexts where the cultural mandate is one of independence, because emotions with distancing functions can be thought of as expressing and achieving independence.
2. Socially engaging emotions (friendly feelings, shame) would be more prevalent in Japanese contexts where the cultural mandate is one of interdependence, because emotions that serve affiliative functions are consistent with this Japanese mandate.
   (Mesquita, Boiger, and De Leersnyder 2017: 100)

Indeed, consistent with the researchers' predictions, Americans appeared to experience negative disengaging emotions (e.g., anger) more strongly than the Japanese group, while Japanese experienced negative engaging emotions (e.g., shame) more strongly than Americans. The dimensions of individualism and collectivism in exploring the cultural differences in emotional experience has often been used as a criterion in other similar studies that have particularly focused on negative emotions (e.g., Schouten et al. 2020). In sum, the cross-cultural research shows that members of certain cultural communities or societies are socialized, through culture, into constructing, displaying, regulating, and interpreting negative emotions (Mackie et al. 2009; Pavlenko 2006; Shulova-Piryatinsky and Harkins 2009). How these are realized in and through language and discourse is the focus of the next section.

4 Negative emotions and language

Discourse plays an essential role in the construction and display of negative emotions. In particular, stories and narratives are excellent sources that enable researchers to analyze and examine emotions. People may need to tell their experiences or stories that involve negative emotions to seek support, guidance, sympathy, or solidarity, among numerous other reasons. Narratives can also be used as a tool to regulate negative emotions and reduce distress. For example, in a series of studies that evaluated the effectiveness of narrative regulating sadness and anger, Pasupathi, Wainryb, Mansfield, and Bourne (2017) found that "narrative is effective at down-regulating negative emotions, particularly when narratives place events in the past tense and include positive emotions" (Pasupathi et al. 2017: 44). According to Kleres (2011), there is a strong, mutual link between emotions and narratives; "the nature of emotions is narrative and conversely that narratives are emotional" (Kleres 2011: 185). To understand the construction of negative emotions in and through discourse, researchers have typically chosen binary positive/negative emotion categories, such as pride versus shame (e.g., D'argembeau and Van der Linden 2008) or happiness versus sadness (e.g., Larsen and Green 2013), and they have focused on a wide array of narrative features, for instance, narrative structure (e.g., Bohanek, Fivush, and Walker 2005), syntactic complexity (e.g., Wang 2020), narrative length (e.g., Fivush et al. 2007), narrative coherence (e.g., Waters et al. 2013), or emotion word choices (e.g., Marian and

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Kaushanskaya 2008). Furthermore, the link between construction and expression of negative emotions and memory has gained attention, resulting in a strong body of literature. In all these areas, research has produced mixed and inconclusive results, though they offer unique and nuanced insights regarding different features of certain negative emotions. Waters, Bohanek, Marin, and Fivush (2013) acknowledge that "complicating the issue, researchers employ a variety of measures (e.g., narrative or questionnaire) that make comparison across studies difficult" (Waters et al. 2013: 633).

4.1 Narrative coherence and negative emotions

Klein and Boals (2010) maintain that "narrative coherence is an important concept in studies of how people come to understand and cope with negative or stressful events in their lives" (Klein and Boals 2010: 256). Prior research generally confirms that narratives that involve negative emotions lack coherence and require more cognitive processing. In a study by Bohanek, Fivush, and Walker (2004), 44 female undergraduates were asked to narrate in writing an intensely negative experience, a moderately negative experience, an intensely positive experience, and a moderately positive experience. The researchers analyzed the structure of each narrative in terms of complexity (e.g., the level of grammatical and semantic structure) and coherence, and they found that "negative narratives contain more negative emotion, cognitive processing words, and passive sentences than positive narratives, and positive narratives contain more positive emotion words and are more structurally complex than negative narratives" (Bohanek, Fivush, and Walker 2004: 61). Furthermore, the participants rated negative narratives, the narratives that involved negative life experiences (e.g., death, mishaps on vacation, etc.), as more emotional than the positive ones. Similar findings were reported by Klein and Boals (2010), who compared the narratives about positive events to those about negative ones and found that negative narratives included more cognitive words and more lexicon denoting negative emotions. The findings of another study (Habermas, Meier, and Mukhtar 2009) with young women also showed that negative narratives including *anger*, *sadness*, and *fear* were longer, more often had a complication section, and required more effort by the narrator to process the events. More cognitive words or cognitive processing in narrating stories or experiences that involve negative emotions might have multiple explanations, but perhaps the most obvious one is that negative emotions are unpleasant and thus challenging to express verbally and cognitively, or people may experience difficulty in searching for meaning associated with negative emotions. Habermas and Berger (2011) argue that the cognitive processing of negative emotions is also related to how well the individual has coped with the negative experience or emotion. According to Boals and Klein (2005), frequent uses of cognitive words may be indicative of an individual's intent to draw causal connections to make sense of the negative experience or emotion. In their study that involved 218 college students' written narratives of romantic relationships that ended, they found that participants who experienced high levels of *grief* used more causal words in their written narratives, probably because they tried to understand why the particular negative experience happened to them.

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4.2 Syntactic complexity, sentence structure, and negative emotions

Syntactic complexity or sentence structures also shed light on the expression of negative emotions in discourse (Kleres 2011). Individuals may use passive constructions more often than active voice in narrating events involving negative emotions, as they may distance themselves from the experience. In two comparative studies conducted with women and 5- and 8-year-old girls, Habermas, Meier, and Mukhtar (2009) found that "in adults, indirect speech was more frequent in anger narratives and internal monologue in fear narratives" (Habermas, Meier, and Mukhtar 2009: 751). The use of past tense is very common, too (Habermas and Berger 2011; Pasupathi et al. 2017). In a longitudinal study of child-parent interactions on negative and positive emotions, Lagattuta and Wellman (2002) observed that "children and parents talked about past emotions, the causes of emotions, and connections between emotions and other mental states at higher rates during conversations about negative emotions than during conversations about positive emotions" (Lagattuta and Wellman 2002: 564). Their results also indicated that negative emotion discourses "included a larger emotion vocabulary, more open ended questions, and more talk about other people" (Lagattuta and Wellman 2002: 564). Memory and recalling abilities play a role in expressing and re-constructing negative emotions experienced in the past. In recalling events that involve negative affect, individuals may choose not to present themselves in negative terms. Their self-evaluations may dismiss negative emotions to save face or maintain a positive self-image. D'argembeau and Van der Linden, (2008) asked participants in their study to remember positive and negative events that involved "self-evaluations (i.e., pride and shame) and positive and negative events that involve evaluations about others (i.e., admiration and contempt)" (D'argembeau and Van der Linden 2008: 538). Their findings indicated that the participants remembered positive events with more details than negative events that involved self-evaluations. It is important to note here that most of the research reviewed above has focused on monolingual narratives. The question 'how does the bi/multilingual mind make sense of negative emotions?' has been asked to address that gap in the literature. This is the question to which I turn my attention next.

5 Negative emotions and bi/multilingual mind

As I have stated earlier, the relationship between language and emotions has been extensively investigated, yet mostly through a monolingualism-oriented lens (Pavlenko 2006). However, in a world that is becoming increasingly multilingual, it is important to understand the emotionality experienced by bi/multilingual and bi/multicultural individuals. Pavlenko (2009) argues that an important characteristic of the bilingual lexicon is emotions, and levels of emotionality vary across languages, cultural contexts, and word types. For example, Pavlenko explains that while *envy* is perceived to be a negative emotion, its equivalent in Chinese *xian mu* has rather a more pleasant and favorable connotation. While a large number of studies have focused on how negative emotions affect the bilingual or multilingual individual's second or third language learning and development, a few others have aimed to understand crosslinguistic or crosscultural constructions and interpretations

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of negative emotions. In these studies, 'anger' (e.g., Dewaele 2006; Ho 2009), 'anxiety' (e.g., Dewaele 2007; Gregersen and Horwitz 2002), and 'fear' (e.g., Cutrone 2009) have been investigated more widely than other negative emotions.

Multilingual individuals typically use both or all the languages that they function in for negative emotional expressions, but the variations in their choices are complex and may not follow certain patterns. A multilingual individual may choose a particular language over others for negative emotional expressions for a wide variety of interactional purposes. Language proficiency or competence is an important factor that affects the language choice in expressing negative emotions, though many other factors influence the choice and use.

5.1 Language choice in expressing negative emotions

Whether bilingual or multilingual individuals express negative emotions more in their first or additional languages has been a topic of interest, and the literature offers mixed results. There is strong evidence indicating that bilingual individuals tend to use negative emotions and expressions in their second or additional languages more than they do in their first languages when narrating the same event or experience. For example, a study by Pavlenko (2006: 139) found out that:

> due to crosslinguistic differences in the means of emotional expression, they [Japanese-English bilinguals] have distinct linguistic preferences for expression of particular emotions. For instance, several Japanese-English bilinguals commented on their preference of English as the language of anger, because in the Japanese culture, anger is at best expressed indirectly while English condones a direct expression of anger. (Pavlenko 2006: 139)

The level of directness plays an important role in expressing negative emotions given the impact on subsequent interactions and relationships. In Western cultures, individuals may use certain linguistic strategies as they communicate negative emotions in order to not lose face. Since the display of negative emotions, especially in face-threatening speech acts (e.g., criticism, insult, accusation, etc.), usually involves strategic mitigation and softening through hedges in certain Western languages like English, the individuals who speak them as an additional language are expected to master the appropriate speech acts as well as pragmatic understandings associated with them.

Another reason why bilingual or multilingual individuals may choose their second or additional language(s) to display negative emotions may be to distance themselves from the negative experience associated with those emotions. Kheirzadeh and Hajiabed (2016) investigated if Persian monolinguals and Persian-English bilinguals showed any difference as they expressed positive and negative emotions in their sad and happy autobiographies. The findings indicated no significant difference between the two groups in expressing happy memories. Regarding the sad memories, however, bilingual participants expressed more negative emotions in the second language. The researchers explain this difference by drawing attention to the common claim in second language acquisition (SLA) research that second language "is the language of emotional detachment and distance" (Kheirzadeh and

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Hajiabed 2016: 55). In a related study, Dylman and Bjärtå (2019: 1284) "investigated the potential of purposeful second language (L2) use in decreasing the experience of psychological distress" and whether "second language processing can reduce the experience of negative emotions" (Dylman and Bjärtå 2019: 1285). They asked Swedish speakers of English to read texts with distressing content in both Swedish (L1) and English (L2). The researchers found that "when participants read the negative texts in their first language (Swedish), they reported lower ratings of distress after having responded to questions about the text in their second language (English), compared to when they responded in their first language (Swedish), which resulted in higher ratings of distress" (Dylman and Bjärtå 2019: 1288). The researchers conclude that "purposeful second language use can diminish levels of distress experienced following a negative event encoded in one's first language" (Dylman and Bjärtå 2019: 1284). This and other studies indicate that bilingual or multilingual individuals may choose to express negative emotions in their additional language rather than in their first language for a variety of reasons, including but not limited to gaining distance, exercising power and self-control, or just practicing the language itself (Pavlenko 2009). Pavlenko (2009) claims that "the language learned later in life also allows speakers to use taboo and swearwords, avoiding the feelings of guilt and discomfort internalized in childhood with regard to L1 expletives" (Pavlenko 2009: 159).

Pavlenko (2006) argues that for some multilingual speakers, an additional language may be emotionally neutral; however, if the individual experiences oppression, discrimination, or marginalization based on their abilities in the additional language, this language then may carry more negative emotional values for the individual. Marian and Kaushanskaya (2008) further this argument, suggesting that "as feelings towards a language and culture change, the access to the emotion lexicon may change as well" (Marian and Kaushanskaya 2008: 9). This is an area where further research is needed.

In contrast to what I have presented in this section so far, a few other studies have presented counter-evidence indicating that the first language is the preferred one in expressing negative emotions. Dewaele (2006), for example, specifically focused on 'anger' and examined multilinguals' language choice for expression of anger in a variety of contexts. His study included 1,454 multilinguals who contributed to a web questionnaire database. Dewaele chose four main independent variables: (i) degree of socialization in the language other than the first language, (ii) acquisition context, (iii) age of onset of learning the language and, (iv) self-perceived oral proficiency. The dependent variable was a frequency score reflecting habitual language choice for the expression of anger. The findings indicated that while "speakers' L1 is generally the preferred language for expression of anger with monotonic decline in languages learned subsequently," the additional language "can become the preferred language to express anger after a period of socialization" (Dewaele 2006: 14). The findings also indicated that "the participants who learned their language(s) in an instructed setting used that language less frequently to express anger than those who learned the language in a mixed or naturalistic environment" (Dewaele 2006: 14) and there was partial support for the hypothesis that "participants who started learning a language at a younger age used that language more frequently to express anger than those who started later" (Dewaele 2006: 14). Dewaele's study is important for its focus on one specific negative emotion and its contextualized expression by multilingual speakers who come from a wide variety of backgrounds.

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5.2 Additional language learning/use, identity, and negative emotions

A large number of studies have also examined how negative emotions might affect second or foreign language learning and use. 'Anxiety' has perhaps received the most attention (see Horwitz 2010). Multi-faceted nature and different types of 'anxiety' (e.g., trait anxiety, state anxiety, writing anxiety, speaking anxiety, etc.) have also been recognized in SLA studies and examined widely yielding mixed results regarding the effect of anxiety on second or foreign language learning, development, and use. *Language anxiety* has been offered as "a term that encompasses the feelings of worry and negative, fear-related emotions associated with learning or using a language that is not an individual's mother tongue" (MacIntyre and Gregersen 2012: 103). In relation to anxiety in the context of SLA, *fear* of evaluation and *fear* of speaking have also been examined and identified as sources of second or foreign language anxiety (Cutrone 2009). A few other negative emotions, such as *shame* or *guilt*, have been investigated but also in relation to language anxiety. Indeed, Imai (2010) observes that "the mainstream SLA investigations have prioritized a particular type of negative emotion (language anxiety), whereas other emotions that one may experience over the course of language learning and use, such as enjoyment, relief, anger, happiness, hope, gratitude, jealousy, love, and so on, have been sidelined" (Imai 2010: 280). Moreover, the research on language anxiety has heavily relied on quantitative methods, in particular, surveys.

More recent studies in applied linguistics have focused on negative emotions in identity work, mostly depicting how some learners of English experience negative emotions when they are marginalized or discriminated against in multilingual contexts. In her study on recently arrived immigrant students in Australian high schools, Miller (2000) showed how those students felt lonely, isolated, and unhappy as they developed new identities in the new sociocultural environment. Similarly, five immigrant women in Peirce's study on learner identities (1995) were often uncomfortable and unlikely to speak, though they were highly motivated. In a classroom-based study (Kayi-Aydar 2014), international students in a college ESL class experienced the emotions of frustration and sadness when others (e.g., peers) positioned them in the ways that they did not desire. Likewise, numerous other studies have documented how societal stereotypes, socioeconomic status, ethnic discrimination, negative connotations of being an ESL learner, and negative imposed identities have contributed to ESL learners' sense of isolation and loneliness as well as the stress and pressure they felt to succeed in school or society (e.g., Bashir-Ali 2006; Kayi-Aydar 2018; Menard-Warwick 2008). While these studies often depicted learners' negative emotions as they were developing new identities, negotiating the existing ones, or resisting the ones imposed on them, those emotions were not the primary focus. Instead, the negative emotions were either implicitly addressed or peripherally examined.

A significant contribution to the emotionality in SLA is Matthew Prior's work on emotion and discourse in second language narrative research (see Prior 2016). Interestingly, Prior notes that second language learners or speakers in his research in general tend to speak more about the negative emotions that they experienced in their second/foreign language learning journey. Even the positive experiences that they narrate appear to generate

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intense and memorable complaints or mistreatments that typically result in *stress, sadness, anger, fear, isolation, estrangement*, or *disappointment*. Prior (2016) argues that this observation is common across other SLA studies that focus on negative emotions and offers a possible explanation:

> Perhaps much of the contemporary emphasis on negativity may be attributable also to the social turn (Block 2003) in L2 studies and researcher interest in revealing the personal understandings and dramatic aspects of human experience and communication. Within L1 and L2 autobiographical interview research [...] negative emotionality is also closely implicated in the representation of experience and speakers' claims of authenticity and their work to assemble factual or believable accounts for the researcher. (Prior 2016: 186)

Prior points out the researcher bias, arguing that researchers tend to focus more on negative emotions rather than the positive ones as well as coping strategies, and he underscores the importance of crafting interview questions in ways to elicit a variety of emotions and avoid the risk of narrowing the range of potential emotions or experiences.

6 Conclusion

Despite the typical negative value associated with negative emotions, it is important and necessary to study negative affect. While negative emotions in general are perceived as undesirable and may trigger alarms, people from different cultural contexts may interpret these perceptions and alarms in different ways (Chentsova-Dutton, Senft, and Ryder 2014). The cross-cultural research has offered important insights and invaluable knowledge regarding the role of the cultural context or background in understanding different kinds and dimensions of negative emotions. Nevertheless, this line of work should be approached with caution, as most of the studies in this area treat individuals as members of a certain single cultural group. In a world that is becoming more and more diverse, such static understandings of cultural membership or ethnic/racial background are problematic for various reasons. The same individual might belong to more than one culture, and individuals' understandings about their ethnic/racial/cultural background may also change or shift over time. Looking across the samples and cases of cross-cultural work surely advances our understandings about the link between cultural differences and negative emotions; yet the heterogeneity and uniqueness of individual experience as well as the fluid nature of one's sociocultural background should always be kept in mind. The work on negative emotions in the context of bi/multilingualism has also offered substantial knowledge regarding many different dimensions of construction and expression of negative emotions, and this work continues to grow. More work is still needed on the plethora of factors that appear to affect bilingual or multilingual individuals' interaction with and expressions of negative emotions. Furthermore, there are still many negative emotions that have not been adequately examined in bi/multilingual contexts or discourses. As seen in numerous studies I reviewed above, discourse and narrative offer invaluable insights in illustrating how negative emotions are socioculturally constructed, expressed, interpreted, or regulated. As I conclude, I echo Habernas, Meier, and Mukhtar (2009) who emphasize the need "that dif-

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ferent emotions should be studied in how they are narrated, and that narratives should be analyzed according to qualitatively different emotions" (Habernas, Meier, and Mukhtar 2009: 751).

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52 Anger from a language-based perspective

1 Introduction
2 Anger lexicons across languages
3 Aspects of variation in anger semantics
4 Conclusions and further research
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Abstract: Psychology studies prioritize a broad understanding of anger as a prototypically negative and confrontational emotion triggered by an offense against the self or relevant others, typically leading to the experiencer's loss of control and (impulse for) retribution. However, this generalization overlooks the rich variability of anger concepts available in different languages and disregards salient aspects of both within- and cross-cultural variation in anger experiences. This chapter seeks to demonstrate that language-based approaches are well-suited to capture this variation. To this end, after a succinct discussion of the ubiquity of the anger lexicon across languages, we systematically review aspects relevant for the differentiation of anger terms within and across languages. The chapter concludes with a discussion of the utility of language-based research for psychological expert theories of emotion and with an argument for both multi-methodological and interdisciplinary synergies in future research.

1 Introduction

Anger is a widely and extensively investigated emotion that has spurred extensive literatures across a variety of disciplines. In psychology, stemming from an almost century-long theorizing and debate (see Russell and Fehr [1994], van Brakel [1993] for reviews), anger has come to be generally defined as a negative, high-arousal, and powerful confrontational emotion triggered by a demeaning offense against the self or relevant others, typically leading to the experiencer's loss of control and (impulse for) retribution (e.g., Lazarus 1991; Scherer, Summerfield, and Wallbott 1983). Under this broad definition, anger is deemed a "basic" (Ekman 1999; Ortony and Turner 1990) or "modal" emotion (Scherer 2005) that has emerged in all human societies in response to the obstruction of pertinent goals or needs.

However, while useful for operationalization in empirical research, this general definition overlooks the rich variability of anger concepts observed in different languages and disregards salient aspects of both inter- and intra-cultural variation in the ways anger is conceptualized. Cross-culturally, two major dimensions are implied in how anger is experienced in different communities. These dimensions originate from studies of business cul-

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ture, but have since then become the dominant paradigm in cross-cultural psychology (cf. Section 3 for additional aspects of variation). The first dimension is *individualism* versus *collectivism*, which sets apart cultures constructing an individual's self-image as independent from the community, as compared to cultures where the two are more interdependent (Hofstede 2001). Accordingly, in individualistic groups, anger is more likely perceived as emphasizing personal assertiveness and pursuit of personal goals; by contrast, in collectivistic groups, it would be perceived more as a socially threatening emotion (Markus and Kitayama 1991). The other dimension is *power distance* and refers to the extent to which power inequality is tolerated in a society; it juxtaposes more egalitarian, low-power-distance societies against high-power-distance societies, in which large power gaps between subordinates and authority figures are expected and tolerated. In the latter cultures, manifesting anger towards higher-status people is less socially acceptable (Hofstede 2001). Overall, substantial evidence in cross-cultural psychology indicates that variability in the degree to which anger is explicitly manifested is particularly pronounced between the industrialized Western countries (high on individualism and low on power distance) and traditional collectivistic cultures, frequently alluded to by anthropologists as "peaceful societies", such as the Tahitian (Levy 1983), Samoan (Gerber 1985), Ifalukian (Lutz 1982, 1983), Tongan (Bender et al. 2012), or Utku Inuit (Briggs 1970).

Another area of variation across languages is taxonomy and the reasons why different anger types are distinguished within a culture. While psychology has predominantly focused on two anger variants only, the so-called "hot" and "cold" anger, underpinned above all by their different degree of expressiveness (Bänziger, Grandjean, and Scherer 2009), many more types of anger can be identified. The aspects distinguishing anger types within one cultural group are many and varied, with only partial cross-cultural congruence. For example, in East Cree, a native American language, anger verbs are differentiated by the event that elicits the emotion, thereby setting apart *chishû-hkateu* 's/he is angry/cranky because s/he is hungry' and *chishuw-îu* 's/he is angry/upset because s/he has so much work' (Junker and Blacksmith 2006: 294). By contrast, the taxonomy of anger nouns in Lohorung, a Kiranti language of eastern Nepal, focuses on the one who experiences the emotion, thus setting apart *sinti'kheme*, a form of anger typically ascribed to children (and rarely women), and *yack'khame* 'justified anger' attributed to ancestors and adults (Hardman 2004: 340–341).

In this context, the present chapter considers both cross- and intra-cultural vectors of variation in the representation of anger. Among the many methods available to study emotion lexis (Soriano 2013; Ogarkova 2013, 2016), the paradigms discussed in this chapter will include both elicitation-based studies (which investigate responses provided by language speakers to different linguistic tasks) and observation-based studies (concerned with the analysis of the contexts of use of anger words in a language). Within elicitation-based studies, we will consider evidence from several tasks: the labelling of emotional stimuli (such as faces or scenarios), semi-structured interviews, free-listing and classification of emotion words based on perceived similarity, and the GRID approach (Fontaine, Scherer, and Soriano 2013), i.e., the analysis of native speakers' ratings on the meaning of emotion words.

In our discussion of observation-based studies, we will draw on the findings reported in several linguistic paradigms, including two most prolific traditions in the study of emo-

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tions: the Natural Semantic Metalanguage (NSM; Wierzbicka 1992, 1999) and Conceptual Metaphor Theory (Lakoff and Kövecses 1987). In addition, we will discuss results from corpus-based metaphor research, intercultural pragmatics, and frame semantics.

The remainder of this chapter is organized as follows: a discussion of the ubiquity of anger lexemes across languages is provided first (Section 2), to be followed by a systematic overview of pertinent aspects of variation in anger semantics (Section 3). Based on the reviewed evidence, we then discuss the utility of language-based research for expert theories of emotion and argue for both inter-methodological and inter-disciplinary synergies in future research (Section 4).

2 Anger lexicons across languages

There is consistent evidence that most languages have words overlapping in meaning with some of the core aspects of the English word *anger*. This deemed emotional universal – formulated first by Wierzbicka (1999: 36) – was substantiated in Hupka, Lenton, and Hutchison's (1999) dictionary study that, based on the evidence from 64 languages from 60 major language groupings, empirically established 'anger' to be the first emotion category to be named in any language that has emotion words. Anger is lexicalized even in the languages with the smallest emotion vocabularies, such as Chewong, Fante, and Dagbani, possessing a mere 7, 14, and 10 emotion words, respectively (Ogarkova 2013: 51).

However, the scope and boundaries of the concept "anger" differ considerably across languages. Many anthropological studies on African languages report conceptual blurring between anger and sadness, as in the Luganda verb *okusunguwala* ('to get angry') that also means 'to get sad' (Orley 1970), or *utsungu* in Kigiriam meaning both 'anger' and 'grief' (Parkin 1985; cf. Izdebska [2015] on the conflation of anger and grief in the TORN-family of words in Old English). Other languages conflate anger and passion/arousal, as in Ilongot *liget* spanning together anger, passion, and envy (Rosaldo 1980), or Indonesian *geram* ('fury/passion') (Shaver, Murdaya, and Frailey 2001). Finally, anger is sometimes subsumed under the class of unpleasant feelings or sensations, as in Bemba *fulwa* 'to be angry; displeased' or Mataco *yethkat no yej* 'torments me; annoys me' (Hupka, Lenton, and Hutchison 1999: 276–278).

Being among the first emotions to be encoded in language, anger has developed rich and varied vocabularies. Over a century ago, Hall listed 127 words "bearing on this state" (anger) in English, noting that his list was "far from exhaustive" (Hall 1899: 517–519). Anger has also emerged as an abundant class of terms in languages as diverse as Chinese, Indonesian, Basque, and Tagalog, among numerous others (see Table 52.1). Rich anger lexicons have also evolved in cultures where anger is rarely displayed, such as the Tahitian that is reported to have 46 anger words (Levy 1983).

Yet, despite the ubiquity of the category, there appears to be no one-to-one correspondence in the anger lexicons, neither in terms of the number and content of clusters emerging in different languages (see Table 52.1), nor in the lexicalization of a "prototype" anger meaning that would be invariably observed in any language. Correspondences are not immediate even in typologically close languages spoken by culturally similar groups, like

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Tab. 52.1: Anger and its varieties across languages.

Study	Language	*N*	Anger subtypes
Russell and Fehr (1994)	English	32 words	*Fury, rage, mad, anger at self, violent, aggravation, temper tantrum, hate, hostility, fighting, frustration, annoyance, yelling, spite, bitterness, jealousy, impatience, upset, irritation, resentment, failure, humiliation, disturbed, indignant, disappointed, tension, discontent, envy, disgust, depression, sorrow, fear*
Shaver et al. (1987)	English	29 words 6 groups	[*Irritation, aggravation, agitation, annoyance, grouchiness, grumpiness*]; [*Exasperation, frustration*]; [*Rage, outrage, fury, wrath, hostility, ferocity, bitterness, hate, loathing, scorn, spite, vengefulness, dislike, resentment*]; [*Disgust, revulsion, contempt*]; [*Envy, jealousy*] [*Torment*]
Storm and Storm (1987)	English	39 words 4 groups	[*Anger, mad, choler, fury, rage, wrath*]; [*Annoyed, aggravated, displeasure, fed up, frustrated, impatient, irritated, not pleased, pissed off, put out, sore, teed off, ticked off, frown, stern, unamused*]; [*Indignant, insulted, irate, offended, outraged*]; [*Cross, cranky, discontent, dissatisfied, grouchy, grumpy, moody, petulant, pique, sulky, bitch, pout*]
Shaver, Murdaya, and Fraley (2001)	Indonesian	31 words 7 groups	[Anger, boredom, feeling fed-up: *bosan, jenuh*]; [Jealous distrust: *cemburu, curiga*]; [Envy, resentment: *tinggi hati, iri, berdengki, dengki*]; [Pent-up anger: *gemas, gregetan*]; [Bitterness: *ngambek, tersingung*]; [Hatred, loathing: *muak, benci, dendam*]; [Anger, vexation: *histeris, senewen, emosi, kesal, sebal, mangkel, dongkol, jengkel, panas hati, kalap, murka, naik darah, naik pitam, marah, berang, geram*]
Shaver, Wu, and Schwarz (1992)	Chinese	21 words*	Disgust, dislike/disgust, dislike, abhorrence, hate, annoyance/hate, resentment, irritation/annoyance, rage from shame, fury, anger, indignation, wrath/indignation, indignation, indignation/worry, hidden resentment, sadness/resentment, shame/resentment, jealousy, jealousy/hate, jealousy
Church et al. (1998)	Tagalog	29 words 12 groups 2 clusters	{[Furious: *gigil*]; [Disgusted: *muhi*]; [Bored: *inip*]; [Fed-up: *suya*]; [Angry: *galit*]; [Disgusted: *aburido*]; [Exasperated: *bugnot*]; [Exasperated: *kunsumido*]; [Irritated: *asiwa*]} {[angry at oneself: *galit sa sarili*]; [Discontented: *deskontente*]; [Dismayed: *desmayado*]}

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Tab. 52.1 (continued)

Study	Language	*N*	Anger subtypes
Alonso-Arbiol et al. (2006)	Basque	27 words 9 groups	[Arrogance, haughtiness: *harrotasuna , soberbia*]; [Distrust: *mesfidantza*]; [Envy, jealousy: *inbidia , jeloskortasuna, zeloak*]; [Fit of rage: *beroaldia*]; [Exasperation: *sumintasuna*]; [Resentment: *erremina*]; [Feeling fed up: *ernegazioa*]; [Anger, fury: a*morrua, errabia , haserrea, furia, kolera*]; [Hatred, aversion: *higuina, nazka, bihozgabetasuna, antipatia, areriotasuna, etsaitasuna, desprezioa, mespretxua, ezinikusia,gorrotoa, bekaizkeria, gaizkinahia*]
Lutz (1982)	Ifaluk	7 words 3 groups	[Hate: *gasechaula*]; [Justified anger: *song,* irritation/small anger: *lingeringer*, short-temper: *tipmochmoch,* frustration/grief: *tang*]; [jealousy/ competitiveness: *sagengaw, anger at oneself: niyefiyef*]

Note. Original words in the languages are shown in *italics*. *For the original Chinese words, see Shaver et al. (1992: 192–194).

English and German. As noted by Durst, "there is no German word that perfectly matches the English word *anger*, and none of the German words [...] has a clear counterpart in English" (Durst 2001: 188). In this context, a legitimate question arises: what aspects underlie the differentiation of anger concepts across and within languages? In the next section, these aspects will be systematically reviewed.

3 Aspects of variation in anger semantics

3.1 Intensity

One immediately obvious aspect of variation among anger concepts is the degree of intensity of the denoted emotion. For instance, Russian anger verbs can be classified into four classes, ranging from lower-intensity anger (*dosadovat'* 'be vexed', *razdrazhat'sya* 'be irritated'), through medium intensity anger (*serdit'sya* 'to feel actively angry/cross', *zlist'sya* 'to be angry'), to two further groups referring to very intense anger: firstly, *vozmuschat'sya/ negodovat'* ('to feel indignant') and *gnevat'sya* ('to feel justifiably angry') and, secondly, *besit'sya* ('to be mad') and *privodit' v' yarost'* ('to get infuriated') (Wolf 1996). In English, five classes of anger lexemes were also identified in applied counseling settings as useful anchors to help people to more precisely describe the quality of their angry feelings: [*annoyed, bothered, irritated*], [*angry, irked*], [*fired-up, indignant*], [*irate, exasperated, fuming*], and [*furious, enraged*] (Kassinove and Tafrate 2002). This variation on intensity within the anger family appears to hold in non-Western languages as well, as revealed by anthropological research: in Woleaian, spoken by the Ifaluk, alongside with the intense *song* 'justi-

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fied anger', one can also find *lingeringer* ('irritation/small anger') and *tipmochmoch* ('short-temper'), both of which Lutz describes as "milder responses to frustration" (Lutz 1982: 117). Likewise, Junker and Blacksmith (2004: 194) note that, in the Cree language, *neshtâmeyih-tam* ('he/she is angry') refers to a feeling milder than *chishuwâsû* ('s/he is angry').

Empirical studies also substantiate this variation. In a factor analysis of US English speakers' groupings of emotion words according to their perceived similarity, Shaver et al. (1987: 1070) found that English *rage* and *fury* loaded higher on intensity than terms like *irritation*, *annoyance*, and *frustration*. Likewise, the analysis of English and Chinese speakers' ratings of inferred emotional intensity yielded the following gradations of anger concepts, from more to less intense varieties: *mad* → *rage* → *angry* → *annoyance* (Strauss and Allen 2008) and *baonu* 'rage' → *jifen* 'wrathful' → fennu 'angry' → *fenmen* 'resentful' → *shengqi* 'angry' (Lin and Yao 2016: 11). Variation can also be found between varieties of the same language. For instance, analyzing people's ratings of possible features in the meaning of emotion words, Soriano et al. (2013: 352) found that *molesto* ('annoyed, offended') in Colombian Spanish denotes a more intense and expressive anger than *molesto* in peninsular Spanish.

Interestingly, the most aroused anger subtypes, such as English *fury* and *rage* or Indonesian *berang* ('anger, fury') and *naik darah* ('rising anger, becoming hot-headed'), tend to be perceived by language speakers as the most prototypical, i.e., as the clearest examples of the anger category (Shaver at al. 1987: 1066; Russell and Fehr 1994: 192; Shaver et al. 2001: 218). In a study of 17 anger words in Spanish and Russian (Soriano et al. 2013) and 25 anger words in English, Russian, and Spanish (Ogarkova and Soriano 2018), the most intense anger types were characterized by prototypical anger features, such as high power (i.e., feeling strong and ready to act; Brosch 2009: 312), expressive behavior, and strong confrontational impulses. By contrast, the lower the intensity, the more an anger word would be characterized by feelings of low power, concealing behavior, and a preference for withdrawal. It also appears that richer and more varied metaphorical language is used to talk about intense anger, as compared to milder versions of the emotion (Fainsilber and Ortony 1987).

Across languages, intensity differences have been reported for translation pairs and even cognate terms. For instance, the English term *frustration* is considerably closer to the anger prototype (an intense and expressive emotion) than its cognate terms in French, Spanish, and German (Soriano and Ogarkova 2012).

While intensity is definitely relevant to differentiate anger words within a language and purported translation pairs in different languages, its relevance to discriminate entire anger lexicons across cultures is yet to be determined. The findings reported thus far are inconclusive. For example, while a study of anger words in English, Spanish, and Russian as spoken in the UK, Spain, and Russia found no significant overall linguistic differences in intensity (Ogarkova, Soriano, and Gladkova 2016: 88), participants from mainland China have been reported to rate all anger words as more intense than Chinese speakers in Hong Kong and Singapore (Lin and Yao 2016: 13).

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3.2 Somatic aspects

Another salient aspect in the representation of anger is the physiological or somatic symptoms of the experience. In psychology, physiological changes ascribed to anger include increased body temperature, faster heart rate, muscular tension, and faster breathing (Wallbott 1998). Some of these bodily reactions are well reflected across languages – for example, in the metaphorical representation of anger as a hot fluid boiling within the body, which is found in languages as diverse as English (Kövecses 2000), Spanish (Soriano 2005), Russian (Krylov 2007), Turkish (Aksan 2006), Hindi (Chand 2008), Minangali (Cederholm 2011), and Indonesian (Yuditha 2013) (but see Hsieh [2011] on Formosan languages and Ponsonnet [2013] on Dalabon for exceptions).

Yet, from the perspective of "folk" rather than scientific models of anger physiology, there is considerable variation in the representation of somatic processes involved in anger within and across languages. First, in some cultures, anger is believed to be associated with (imaginary) culture-specific bodily symptoms, such as the feeling of suffocation associated with Greek *stenahoria* 'frustration' (cf. also Chamberlain [1895] on the link between Middle English *anger* and strangulation/choking), or a metaphoric association between nausea and anger in Zulu (Taylor and Mbense 1998). Similarly, discussing the ethno-psychology of Portuguese-speaking Brazilians from Caruaru, Pernambuco, Rebhun (2004) notes that, in this cultural group, the internal workings of anger are believed to cause bruises:

> My informants did not see emotions as concepts but rather as a kind of energy that is physically present, taking up space inside their bodies [...]
>
> Women often showed me small bruises on their thighs and arms, which they attributed to the force of their blood boiling in their veins with anger. (Rebhun 2004: 366)

A second aspect of cultural variation is the salience ascribed to the somatic components of anger (and emotions more generally). Compared to Western populations, which tend to "psychologize" emotions, people in many African, Asian, and indigenous South and Central American cultures tend to "somatize" them (Leff 1973). This is evidenced, *inter alia*, by the dominant representation of emotions via body-part expressions in the latter cultures (see Ogarkova [2013], Ogarkova and Soriano [2014b] for reviews). In many of these cultures, body-related phrases are the only available means to name anger, as it happens with the word *mlifu* 'angry' (lit. 'swollen up inside') in the Ga language, or *do dziku*/*ekpo dziku* 'annoyance/fury' (lit. 'to/be-heart-death/see-heart-death') in Ewe (Dzokoto et al. 2016: 1488). A heightened importance of the somatic is observed even in languages that have rich repertoires of abstract emotion words, such as Russian. In this respect, an analysis of emotion narratives in monolingual English and Russian speakers revealed a higher degree of encoding and emphasis of the somatic in Russian (Pavlenko 2002). Likewise, metaphors emphasizing the somatic/physiological component of anger were found to be more frequent in Russian than in English (Ogarkova and Soriano 2014a). Culture influences the emphasis we place on the somatic, even when people speak the same language. A study on word use in semi-structured interviews on emotional topics showed that, when speaking

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in English about the emotions, including anger, Chinese Americans make more references to the body than European Americans (Tsai, Simeonova, and Watanabe 2004).

Thirdly, languages vary in the degree to which the body-emotion relationship is elaborated and nuanced. In Wolof, for example, there is one literal expression to refer to anger (*dafa mer* 'she is angry'), but at least five body-part phrases to refer to various shades of anger intensity, from *sama xol bi neexul* 'my heart is not sweet' to *sama xol bi fuur* 'my heart is boiling' (Becher 2003: 15). Similarly, Yu suggests that "a difference between English and Chinese is that Chinese tends to use more body parts in its conventionalized phrases of anger" (Yu 1995: 63). The latter observation applies to Russian as well: in a corpus-based study on somatic metaphors, English was found to prefer a representation of anger as located in the body in general (no specification), while, in Russian, the dominant metaphor model located anger in specific body parts (Ogarkova and Soriano 2014b).

Thus far, we have illustrated cross-linguistic differences, but the somatic can also discriminate anger concepts within a language. In a corpus-based study comparing German *Wut* and *Zorn*, Oster (2014) found that both literal (e.g., *vor Wut zittern* 'tremble from anger') and metaphorical (*Wut im Bauch* 'anger in belly') expressions depicting physiological effects of anger were twice more frequent for *Wut* than for *Zorn*. Qualitative variations in preferred somatization modalities have also been reported. For instance, while all anger words in English are represented via metaphors profiling the physiological effects of the emotion, the most virulent ones, such as *fury* and *rage*, seem to be more frequently represented by metaphors implying bodily heat (e.g., *boiling rage*, *simmering indignation*), while the less virulent ones, such as *resentment*, *frustration* and *irritation*, are more likely represented as an illness (e.g., *resentment be a tumor*, *ache with frustration*, *spasms of irritation*; see Ogarkova and Soriano 2018).

3.3 Expression

Expression is a central component of any emotional experience. Regarding anger, psychology has identified several typical facial and vocal characteristics, such as a higher pitch and pitch variability, an increase in fundamental frequency and articulation rate, a lower number of speech pauses, furrowed brows, pressed lips, and dilated nostrils – especially for "hot" as compared to "cold" anger varieties (Bänziger, Grandjean, and Scherer 2009; Matsumoto, Yoo, and Chung 2010; Scherer 2003).

Yet, the expressive symptoms of anger (and emotions more generally) have different salience across cultures, so that some languages prioritize labeling emotions using physically observable expressions (e.g., *frowning*), rather than abstract emotion terms referring to inner states (e.g., *anger*). For instance, in a free-format emotion-face labelling study, US English participants predominantly used discrete emotion words such as *anger* or *disgust*, while Himba speakers (Northwestern Namibia) understood facial expressions more in terms of situated actions – e.g., "smiling" and "looking at something", as well as significantly more frequently used such action descriptors than mental state descriptors (Gendron et al. 2014). Similarly, in another emotion-face labelling study comparing speakers of several European languages (English, Spanish, Italian, and Polish) and Shuar, an indigenous lan-

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guage of Ecuador, Boster (2005) found that European speakers predominantly used emotion words in their labelling responses, while the Shuar used *kajeawai* 'anger' in only half of the cases and resorted to the description of the facial expression (*etser* 'gritting teeth') in the other half. The same relative salience of observable expressive symptoms to designate emotions was reported in several Australian languages, such as Kaytetye (Turpin 2002: 179–180) and Dalabon (Ponsonnet 2014). This trend in non-Western cultures has been tentatively related by some researchers (Boster 2005; Turpin 2002) to a conceptualization of emotions as relational phenomena taking place between people, rather than inside them (see Ogarkova [2013: 54] for a review; cf. Ponsonnet [2014] for other linguistic and experiential explanations).

Anger varieties can also be distinguished based on the relative importance they ascribe to specific expressive modalities: vocal versus visual. For example, in a quantitative analysis of expressions containing the German anger words *Wut* and *Zorn*, Oster (2014: 298–299) found that *Wut* was considerably more frequent in contexts highlighting facial changes, but the words did not differ in their vocal profile. Similarly, in a study of metaphorical body-part containers for anger, Ogarkova and Soriano (2014b) observed that virulent anger types were significantly more frequently localized "in the eyes", while milder anger varieties, particularly irritation (English *irritation*, Russian *razdrazhenie*, and Spanish *irritación*), were more typically contained "in the voice". Similarly, in a study of anger metaphors profiling the acoustic component (Ogarkova and Soriano 2013), indignation concepts (English *indignation*, Russian *vozmuschenie,* and Spanish *indignación*) were found to have the most salient vocal profiles as compared to all other anger concepts in the respective languages.

3.4 Regulation

Emotion regulation, which refers to how people manage and control their feelings, is an aspect of emotion most susceptible to cross-cultural variation. In its prototypical Western reading, anger is an emotion that gives rise to an impulse to respond to a wrongful act, typically directed at the offender (Lazarus 1991). Cross-culturally, however, anger can appear in forms both muted and amplified compared to the Western prototype. For example, there are communities in North Brazil and North Pakistan where anger is generally less expressed compared to Western standards. This happens for different reasons. While Northeast Brazilians "tend to display a profound distrust of particular strong emotions, especially envy, anger, [...], which are seen as socially disruptive because of their very intensity" (Rebhun 1998: 354), among the Pukhtun tribesmen of Northern Pakistan, the reason for regulation is that the outward display of anger is seen as a sign of weakness and lack of control (Lindholm 1988: 234). The amplified expression of anger in non-Western cultures can also be underpinned by different reasons in different communities. Among the Kaluli of Papua New Guinea, anger amplification and staged anger expressions are socially sanctioned forms to manifest a legitimate expectation of redress for a loss (Schieffelin 1983). The Yanomamo tribe of Northern Brazil also amplify anger, but in this case it is because men are expected to be fierce and there are anger-imitating practices that goad

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men into the "appropriate state of rage for the business of killing enemies" (Lindholm 1988: 242; cf. Potegal and Novaco [2010: 14] for an overview of anger in earlier and present-day warrior cultures).

In addition to these examples, the most widely replicated pattern of divergence across cultures regarding emotion regulation relates to the heightened control of socially disruptive emotions expected in collectivistic cultures as compared to individualist ones. Languages aptly reflect this divergence. For example, in many cases, anger terms emerging in collectivistic communities encapsulate the idea of emotion suppression, as the Inuit *qiquq* 'to feel hostile, silent withdrawal, clogged up, on the point of tears' (Briggs 1970) or Samoan *'o'ona* 'anger that is not expressed' (Gerber 1985). In Bahasa Indonesia, a distinct cluster of "pent-up anger" words can be found, too (Shaver, Murdaya, and Fraley 2001; see Table 52.1). Many indigenous languages have been reported to have anger concepts that do not imply a retribution impulse, like Woleanian *song*, which can manifest itself in sulking, refusal to eat, or attempted suicide, rather than aggression towards the wrongdoer (Lutz 1982). Other relevant examples include Yankunytjatjara *mirpan*, whose manifestation is not open physical conflict, but being unsmiling, uncommunicative, and uncooperative towards the offender (Goddard 1991: 273), or Malay *marah*, which is associated with sullen brooding rather than aggression (Goddard 1996). Similarly, in some anger concepts, retribution is not expected to occur immediately and is delayed, as in Arrente *akiwarre*, which contains the notion of "latent revenge" (Harkins 2001: 208).

The idea that anger needs to be controlled is also captured by the metaphors available in a language to talk about the emotion. In Brazil, one salient cultural metaphor encapsulating the idea of anger suppression is *engolir sapos* 'swallow frogs', which, as noted by Rebhun, is used "to mean suppressing anger, hatred, or irritation, and putting up with unfair treatment" (Rebhun 1994: 360). Likewise, many metaphors conventionally used in other languages to talk about anger highlight the need for regulation, such as those in which anger is presented as an opponent in a struggle for self-control (e.g., *wrestle with rage*), or as a substance forcedly contained inside the body (e.g., *repress fury, suppress rage*). The salience of these metaphors can also vary between collectivistic and individualistic cultures. For example, Russian and Spanish anger words have been found to appear more frequently than their English counterparts in metaphorical expressions highlighting enhanced regulation (Ogarkova and Soriano 2013, 2014b; Ogarkova, Soriano, and Gladkova 2016). Interestingly, the most consistent contrast emerged between "fury" concepts (*fury*/*rage* versus *jarost'* and *furia*), suggesting that the tendency to downplay anger in collectivistic societies might be particularly relevant for the most virulent, socially threatening, or poorly controlled anger varieties, like fury. By contrast, the fewest regulation-related differences were observed in indignation concepts (*indignation*, *indignación*, and *vozmuschenie*), suggesting that the codification of morally justified types of anger may be more similar across languages.

The tendency of collectivistic cultures to down-regulate anger compared to more individualistic cultures can be manifested in language use as well. For example, in a psycholinguistic study conducted in English, Spanish, and Russian, the most frequent term used by the English-speaking respondents to label anger-eliciting scenarios was *anger*/*angry*, while the two more collectivistic groups preferentially reported milder forms of anger (e.g., Rus-

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sian *razdrazhenie* 'irritation,' *obida* 'resentment/hurt') or chose words referring to the person's incapacity to act on his/her emotion (e.g., Spanish *impotencia* 'impotence') (Ogarkova, Soriano, and Lehr 2012: 274).

3.5 Causation and social context

Equally relevant for the conceptualization of anger within and across cultures are its socially embedded causal antecedents, i.e., specific circumstances or events that elicit the emotion of anger. The prototypical causal antecedent of anger in Western thought is a "demeaning offence against me or mine" (Lazarus 1991: 122), a notion that can be traced all the way back to Aristotle's *Rhetoric*. Agreeably, previous research has highlighted considerable similarities in what elicits anger in Western and non-Western countries, which often includes the notion of "injustice" or "norm violation" (Scherer, Summerfield, and Wallbott 1983; Scherer et al. 1988). For instance, when presented with *piinte* 'angry' scenarios collected among the Waraoni of Amazonian Ecuador (e.g., "somebody borrows my canoe without permission"), US English speakers invariably reported they would feel *angry*, *frustrated*, *annoyed*, and *vengeful* (Boster 2005; cf. Boucher and Brandt [1981] for similar findings on Malay vs. English).

And yet, despite this overlap, different antecedents lead to the lexicalization of different anger varieties within and across languages. In some cases, those antecedents reflect focal cultural concerns, as in China, a prototypical "shame culture", where a cluster of terms emerged to designate types of anger caused by shame ('rage from shame' or 'shame/resentment', Shaver, Wu, and Schwarz [1992]; cf. Table 52.1).

Many languages have distinct labels for "righteous" anger which arises specifically in response to violations of moral prescriptions, such as English *indignation* and *wrath*, Ifalukian *song* (Lutz 1982), Russian *gnev* (Krylov 2007; Wierzbicka 1998), German *Zorn* (Durst 2001; Oster 2014), or Lohorung *sirda yakcha'bokme* 'justified anger' (Hardman 2004). A broader sense of "justified" cause seems to structure the anger lexicon in Russian as well. A corpus-based frame semantics study of a set of anger verbs revealed two clusters: one [*serdit'sya*, *gnevat'sya*, and *negodovat*'] with verbs used in contexts where the cause of the emotion is fully identifiable (which we could call the "justified anger" cluster), and the other [*zlist'sja, razdrazhat'sya, besit'sya*] in which it is not (so they can be found in constructions like "getting angry for nothing/for no reason") (the "unjustified anger" cluster) (Azarova and Sinopal'nikova 2004).

Social context is another pertinent factor of variation. Some anger words encapsulate information about the kinds of people the emotion can be directed at or experienced by. For instance, Russian *gnev* 'justified anger' is more typically an emotion experienced by a superior towards his/her inferior (Apresjan 2013; Krylov 2007); likewise, the Yankunytjatjara use *pikaringanyi* 'violent anger' to talk about anger experienced to equals, but not to children (Goddard 1991: 270). The Lohorung's *sinti'kheme* ('anger, irritation/frustration') is experienced by children (and rarely by women), while their *yack'khame* ('justified anger') is said to be felt by adults and ancestors (Hardman 2004: 340). Finally, some anger varieties are more likely to be experienced by many people at a time (akin to "mob anger"), while

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others are more personalized. This nuance was spotted by Oster (2014: 301), who found that German *Wut* was overwhelmingly more frequent when talking about individuals, while *Zorn* was more frequently used in reference to anger felt by groups of people. Similarly, unlike *nu* 'anger', Chinese *fen* 'anger' is typically used to refer to a "collective" emotion experienced by many people at a time (Kornacki 2001: 277).

Causation and social context are equally relevant for cross-cultural comparisons. Firstly, in collectivistic societies like that of the Tongan, there is a proclivity to report anger as caused more by circumstances than by specific people, so as to minimize the responsibility of other people for a person's anger (Bender et al. 2012). Secondly, in societies with high power distance, such as the Ifalukian, Samoan, or Filipino, anger is rarely acknowledged to be felt towards higher-status people (Gerber 1985; Lorenzano 2006; Lutz 1982). Thirdly, while in Western cultural groups, anger is more typically reported to be elicited by someone a person knows or associates with (an "in-group"), in collectivistic societies, anger is reported as more typically elicited by strangers (an "out-group") (Matsumoto et al. 2008). The latter two tendencies have been substantiated in language-based research as well. For instance, the analysis of word use in a situation-labeling study showed that, in anger scenarios where the offender was a social superior (a boss) or an "in-group" person (a colleague), in contrast to US English-speaking respondents, whose most frequent responses were *anger*/*angry* and *insulted*, Russian and Spanish participants opted for words referring to less aroused, more internalized, or non-retaliating forms of anger, such as *obida* 'hurt/resentment', *razdrazhenie* 'irritation', and *enfado* 'anger-annoyance' (Ogarkova, Soriano, and Gladkova 2016: 87–88). Similarly, as reported in a Natural Semantic Metalanguage study on the Filipino concept *galit* 'anger', the open demonstration of anger towards social superiors and outer in-group members is socially sanctioned. According to one of the study's respondents, "[i]t depends whether the person is my relative, say, my son, husband or another who is my superior. If he is my kin, I openly declare that I was hurt or angry, but if he is my co-employee, a superior or not, I just keep silent, keep it to myself and usually cry" (Lorenzano 2006: 5).

3.6 Social acceptability

The final aspect of variation in the conceptualization of anger we will discuss in this chapter is social acceptability, i.e., the degree to which anger is perceived as a socially welcome emotion. Inferences about social acceptability can be made based on the willingness/reluctance of language speakers to admit experiencing that emotion. For example, reluctance is attested for Ifalukian *gasechaula* ('hate'), which Lutz (1983) describes as the emotion "that people would not say, even in private conversation, they had experienced" (Lutz 1983: 251). In collectivistic societies, where anger is not a welcome emotion, people less readily acknowledge experiencing it, as observed in several studies comparing US English and Japanese speakers (e.g., Kitayama, Mesquita, and Kurasawa 2006). Linguistic evidence of social acceptability can also be found through patterns of language use. For example, three hostility Inuit words – namely, *ningaq* ('to feel/express hostility'), *qiquq* ('to feel hostile'), and *urulu* ('feel/express hostility or annoyance') – seem to occur only in 3rd person refer-

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ence contexts (Briggs 1970). Similarly, in a corpus-based analysis of the frequency of 11 English and 10 Russian anger words in 1st person constructions (e.g., *I am angry* or *it angers me*), Apresjan (2013) observed that the most frequent English words in such constructions were *anger*, *mad*, *fury*, and *rage*, suggesting a relative ease on the part of English speakers to admit feeling violent and intense anger; by contrast, the most frequent words in Russian predicated in 1st person constructions were socially justified forms of anger (*negodovanie*/*vozmuschenie* 'indignation', *gnev* 'righteous anger') and milder anger varieties (*razdrazhenie* 'irritation').

Finally, differences in the social acceptability of anger also emerged in a dimensional analysis of 25 anger words in English, Russian, and Spanish using the GRID approach (Ogarkova, Soriano, and Gladkova 2016). All English words were closer than the Russian ones (and to some extent the Spanish) to the second emerging dimension, defined by features like high social acceptability, frequent, intense, and open manifestation, ease of attribution to both others and oneself, and the possibility of experiencing anger towards all types of wrongdoers, regardless of their social status.

4 Conclusions and further research

In this chapter, we have reviewed evidence accumulated through various language-based approaches derived from psychology, linguistics, and anthropology on both cross- and intra-lingual variation in anger concepts. The results of this overview demonstrate that the ubiquitous emotion of anger, profusely coded in most languages of the world, varies across and within different languages in both Western and non-Western cultural groups alike on a set of pertinent aspects, such as intensity, physiology, expression, regulation, causation and social context, and social acceptability (see Table 52.2 for a summary).

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Tab. 52.2: Summary of overviewed language-based research on intra- and cross-lingual variation in anger concepts.

Aspects of variation	Languages	Methods
Intensity/Arousal	English, Russian, Spanish, German, French, Indonesian, Chinese, Woleaian (Ifaluk), East Cree	Similarity sorting (Shaver et al. 1987); free-listing (Fehr and Russell 1994); introspective semantic analysis (Wolf 1996); intensity ratings (Lin and Yao 2016; Strauss and Allen 2008); GRID (Soriano et al. 2013); corpus-based analysis of metaphor (Ogarkova, Soriano, and Gladkova 2016; Soriano and Ogarkova 2012)
Somatic aspects	Greek, Zulu, Brazilian Portuguese, Ga, Ewe, Chinese, English, German, Russian, Spanish	Semi-structured interviews (Panayitou 2004; Rebhun 2004; Tsai et al. 2004), key informant interviews (Dzokoto et al. 2016); analysis of narratives elicited by visual stimuli (Pavlenko 2002); introspective metaphor analysis (Taylor and Mbense 1998; Yu 1995), corpus-based analysis of literal emotion descriptions (Oster 2014); GRID and corpus-based analysis of metaphor (Ogarkova and Soriano 2018)
Expression	Himba, Shuar, Kaytetye, Dalabon, Polish, Italian, French, German, English, Russian, Spanish	Emotion face labelling (Boster 2005; Gendron et al. 2012); semantic analysis (Ponsonnet 2014; Turpin 2002); corpus-based analysis of literal emotion descriptions (Oster 2014); corpus-based analysis of metaphor (Ogarkova and Soriano 2013, 2014b)
Regulation	Indonesian, Woleaian (Ifaluk), Samoan, Inuit, Brazilian Portuguese, Arrente, Yankunytjatjara, Chinese, English, Russian, Spanish	Similarity sorting (Shaver, Murdaya, and Fraley 2001), anthropological accounts (Briggs 1970; Gerber 1985; Lutz 1982), NSM (Goddard 1996; Harkins 2001); semi-structured interviews (Rebhun 2004); emotion scenario labelling (Ogarkova, Soriano, and Lehr 2012); corpus-based analysis of metaphor (Ogarkova and Soriano 2014a, 2014b; Ogarkova, Soriano, and Gladkova 2016)
Causation and social context	Woleaian (Ifaluk), Lohorung, Yankunytjatjara, Filipino, Tongan, German, English, Russian, Spanish	Anthropological accounts (Hardman 2004; Lutz 1982), NSM (Wierzbicka 1998; Durst 2001; Goddard 1991; Kornacki 2001; Lorenzano 2006); corpus-based analysis of literal emotion descriptions (Oster 2014); frame semantics (Azarova and Sinopal'nikova 2004); introspective semantic analysis (Krylov 2007); questionnaires based on experimentally designed vignettes (Bender et al. 2012), emotion scenario labelling (Ogarkova, Soriano, and Gladkova 2016; Ogarkova, Soriano, and Lehr 2012)
Social acceptability	Woleaian (Ifaluk), Inuit, English, Russian, Spanish, Ukrainian	Anthropological accounts (Griggs 1970; Lutz 1982); corpus-based analysis of 1st person grammatical constructions (Apresjan 2013); corpus-based analysis of metaphor (Ogarkova and Soriano 2014a); GRID (Ogarkova, Soriano, and Gladkova 2016)

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This review, however limited, demonstrates that language-based approaches to the study of anger conceptualization are particularly suited to capture conceptual variation, which, in turn, makes them singularly useful for psychological expert theories and empirical research on emotion in the affective sciences at large. Firstly, outcomes of language-based research can be meaningfully used for *hypothesis generation* in empirical studies. For example, as suggested by corpus-based metaphor studies (e.g., Ogarkova and Soriano 2014a; Oster 2014), virulent anger is more richly coded in metaphorical expressions highlighting the visibility of anger, while the less intense varieties of the emotion are more saliently represented through voice-related metaphors. Accordingly, it would be of interdisciplinary interest to experimentally test whether facial recognition is more accurate in "hot" compared to "cold" versions of the emotion, whereas the latter would be more accurately recognized vocally (cf. Ogarkova and Soriano 2014b: 169).

Secondly, owing to the inherent granularity of language-based analysis, the outcomes of language-based research can contribute *additional aspects* unaccounted for in theories of emotions or not currently operationalized in experimental research. For instance, the variability observed in the lexical codification of anger calls for the operationalization of more subtypes of anger in empirical research, above and beyond the current juxtaposition "hot" versus "cold", and for a more careful interpretation of the findings of the studies that focus on a general understanding of anger only.

For this interdisciplinary collaboration to be fruitful, further advancement is needed in several directions. Firstly, there is a need for a stronger dialogue between different traditions in language-based research itself – for example, by combining methods within a single study, or contextualizing the findings afforded by one method against those provided by another one. The benefits of such combinations include not only obtaining more robust evidence in the long run, but also finding additional insights afforded by each method individually.

Secondly, a more systematic effort could be made to relate the findings of language-based studies to those in emotion psychology. This would give greater visibility in the affective sciences to language-based research, while providing a more general theoretical framework for our observations.

Thirdly, the study of emotion in general would benefit from a more interdisciplinary language, with shared key constructs such as power and arousal, as well as key aspects of emotion such as expression and regulation.

Taken together, these future interdisciplinary collaborations, ideally extending the scope of the anger concepts under scrutiny and languages considered, will bring us closer to a more comprehensive understanding of anger, a wonderfully multifarious emotion that is more variable, complex, and rich in nuance than is typically assumed.

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Mia Silfver

53 Self-conscious emotions

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Abstract: In this chapter, I present psychological research on self-conscious emotions, of which guilt and shame have been studied most often and therefore are the focus of this review. I analyze the role of language in different research methods that have been used for studying self-conscious emotions, including experimental designs, autobiographical narratives, scenario-based questionnaires, and personality questionnaires. Different methodological approaches give somewhat different answers to the question of what guilt and shame are because they emphasize different aspects of emotion. I examine how self-conscious emotions are processed and how they relate to social interaction and action tendencies. I also review research on cultural differences and similarities in self-conscious emotion terms and emotion processes. In conclusion, I suggest that emotion processes are highly similar in different cultures, although vocabulary concerning different emotions may vary. Guilt appears to motivate making amends, although it can sometimes be chronic and unresolved, and therefore related to psychological symptoms. Shame can motivate pursuing the ideal self, if it is not overwhelming; the person believes that improving the self is possible. According to recent research, the feeling of humiliation, being unjustly lowered by others, is the most toxic self-conscious emotion, and it is very likely to motivate aggressive reactions.

1 Introduction

This chapter will address self-conscious emotions from linguistic and psychological perspectives. Psychological research in this area is highly dependent on language: How are emotions labelled and defined in different languages? First, I will analyze how the emotion terms *guilt* and *shame* have been defined in different (mainly North American) psychological theories. Second, I will review empirical results that are based on using emotion terms as stimuli in experimental, questionnaire and narrative studies. Third, I also review studies using emotion features instead of emotion terms for measuring emotions. Finally, I summa-

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rize how cross-cultural studies contribute to understanding the relationships between emotion terms and different aspects of emotional experience.

Guilt, shame, embarrassment, humiliation, and pride have been labelled as self-conscious emotions in the psychological literature. These emotions differ from basic emotions, such as fear and sadness, because they are cognitively more complex, requiring differentiated conceptions of self and others and relatively stable self-representations (personal conceptions of self as a person [Tracy and Robins 2004]). Therefore, very young children are not yet able to experience self-conscious emotions. According to Tracy and Robins (2004), self-conscious emotions arise from complicated appraisal processes, where self-presentations are activated. This means that a person evaluates whether certain perceptions are relevant for the self-concept and whether they are consistent or conflicting with the ideal self. For example, a person might think "I said mean things to my friend, and that is a bad thing because I don't want to be that kind of a person". These processes are inherently social: The behavior of others affects the way we see ourselves, and the way we see ourselves affects the way we perceive others' behavior. Self-conscious emotions have an important effect on human social behaviors, including both prosocial and antisocial behaviors, and they have therefore garnered a lot of research interest in the psychological literature. However, as Haidt (2003) points out, the terms *guilt* and *shame* frequently appear in psychological publications, whereas the terms *pride*, *embarrassment* and *humiliation* are used quite rarely. But what do these concepts mean? The following chapter will address this question.

2 Theoretical perspectives on defining guilt and shame

In the self-conscious emotion domain there have been different and sometimes conflicting ways to define the concepts of guilt and shame. First, there is internal-external differentiation, which states that guilt refers to a guilty conscience arising from transgressions of internalized moral norms, whereas shame refers to feeling exposed to real or imagined rejection by an audience (e.g., Ausubel 1955). From this perspective, fear of shame would motivate conforming to social norms. Based on this view, it has been suggested that shame would be especially salient in so-called collectivistic cultural groups where the self is strongly defined by one's social relations (Benedict 1946; Hofstede 2001; Triandis et al. 1988). In a series of studies, including rating scenarios and personal accounts (as well as literary passages about guilt and shame), Smith et al. (2002) showed that the term *shame* was more associated with public exposure than the term *guilt*.

On the other hand, some researchers argue that this public-private distinction is less relevant, and that guilt and shame differ mainly based on self- or behavior-directed focus. In other words, an ashamed person concentrates on the worthless and inferior self, whereas a guilty person concentrates on the unacceptable behavior (Lewis 1971; Tangney and Dearing 2002; Tracy and Robins 2007). A study using autobiographical accounts indeed showed that the descriptions of guilt and shame included equally public and private contexts (Tangney et al. 1996). Baumeister, Stillwell, and Heatherton (1995) concentrated only on guilt in their study, in which participants were asked to write a description of a real-life

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episode of experiencing guilt. The researchers categorized different contexts that appeared in the descriptions and found that guilt was mainly related to maintaining harmony in interpersonal relationships, as opposed to violating internalized moral principles. They therefore hypothesized that guilt could play an important role in social interaction.

The psychodynamic tradition has its own way of differentiating guilt and shame: Guilt is defined as a feeling of violating moral norms and obligations (superego), and shame is seen as a feeling of not living up to one's standards and aspirations (ego-ideal [Piers and Singer 1955; Lazarus 1991]). Consistent with this view, Lindsay-Hartz (1984) found, when analyzing described guilt and shame experiences, that shame was about the ideal self, whereas guilt was about conforming to moral standards. Teroni and Deonna (2008) conceptualize guilt and shame similarly to the psychodynamic tradition, but they also acknowledge that shame is often experienced in the context of real or imagined rejecting audiences, because these situations violate the values of reputation, honor and privacy that most people consider important. Furthermore, they recognize that guilt typically relates to repairing harm that has already been done.

These different theoretical perspectives all have empirical evidence supporting their claims. Nevertheless, empirical studies often combine different perspectives when defining guilt and shame, or simply use the emotion terms *guilt* and *shame*, which are likely to convey these different meanings.

3 Emotion term approach: experimental studies, questionnaires, and autobiographical narratives

Researchers have applied different empirical approaches to studying self-conscious emotions. First, many studies rely strongly on the emotion words *guilt* and *shame* (and their translations in different languages) when studying these emotions.

3.1 Experimental studies

In experimental studies, these terms have often been used as primes. Experimental studies have also used situational manipulations that are generally perceived as shame- or guilt-inducing. Such studies usually investigate how certain appraisals and emotional experiences affect subsequent action tendencies. De Hooge, Zeelenberg, and Breugelmans (2007) primed participants by asking them to describe either a personal experience of guilt or a personal experience of shame. Guilt priming was found to increase cooperation in a social dilemma game (especially in individuals with self-interest focused attitude), whereas shame priming did not have an effect. However, two other studies showed that shame may have either negative or positive effects on behavior, depending on situational factors. If shame was related to the situation at hand, it motivated prosocial behaviors, whereas unrelated shame did not (de Hooge, Breugelmans, and Zeelenberg 2008). Furthermore, shame may motivate either withdrawal or restoring the threatened self, depending on whether the

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person believes that he or she is able to correct the situation (de Hooge, Zeelenberg, and Breugelmans 2010, 2011). In another study, de Hooge et al. (2011) demonstrated that while guilt motivates prosocial behavior, it still has disadvantages: Guilt induction motivated prosocial behavior towards the person who was the victim of one's action, but that happened at the expense of other people involved in the situation.

Experimental studies on guilt and shame have also investigated others' perspectives: In other words, how does verbally expressing *guilt* and *shame* (using these terms) affect interaction partners? Giner-Sorolla et al. (2008) found that when apologizing for a collective wrongdoing (in this case, environmental damage caused by a factory), expressing shame instead of guilt made the target group feel less insulted. This result was replicated in another context (police injustice against black people in the UK), and in it, the strength of blame was also relevant: those who blamed the police more viewed the expression of shame more positively (Giner-Sorolla, Kamau, and Castano 2010). These results support the view that shame is functional in social relations through its appeasement potential (Keltner, Young, and Buswell 1997).

3.2 Questionnaire studies

In recent years, research interest in group-based or collective self-conscious emotions has grown. Such research has focused on how guilt and shame affect reparation or avoidance motivation in the context of collective wrongdoings towards a specific group. Several studies have found that guilt and shame relate differently to motivation to restore group relations. However, the results have been conflicting: some studies have shown that guilt relates to reparation more than shame does (Brown et al. 2008), whereas other studies suggest that shame motivates reparation more than guilt does (Allpress et al. 2010; Rees, Allpress, and Brown 2013). Some have also found that collective guilt and shame both motivate reparation (Brown and Cehajic 2008). Furthermore, other studies show that shame relates to negative, defensive motivations mainly when it is combined with feelings of rejection by others (Gausel et al. 2012; for a theoretical review, see Gausel and Leach [2011]). The measures used in these studies have often relied strongly on the emotion words *guilt* and *shame*, so the questions about defining and measuring guilt and shame are relevant also for the research on group-based self-conscious emotions. This area of research may also benefit from a thorough analysis of the meanings attached to these terms.

3.3 Autobiographical narratives

Guilt and shame have often been studied using autobiographical narratives of personal guilt and shame experiences. In these studies, the emotion words *guilt* and *shame* have been used for generating the data. The respondents have been asked to describe experiences of guilt or shame, usually in written form. These studies have mainly focused on the differences between guilt and shame, the different characteristics of the experiences, and their motivational implications (Lindsay-Hartz, de Rivera, and Mascolo 1995; Robinaugh

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and McNally 2010; Silfver 2007a; Tangney 1992). Furthermore, Baumeister and his colleagues have used narratives for studying the characteristics of guilt experiences (Baumeister, Stillwell, and Heatherton 1995; Leith and Baumeister 1998), finding that guilt is usually experienced in the context of close relationships, and that it motivates perspective-taking and behaviors that improve or repair relationships (e.g., apologizing). Leeming and Boyle (2013) used narratives to study coping with shame experiences, and their analysis emphasizes the role of social interaction in both experiencing shame and alleviating it.

4 Measuring self-conscious emotions using emotion features

Another prominent line of psychological research on self-conscious emotions has collected data based on emotion features rather than on emotion terms. The theoretical basis for this approach is the componential emotion theory, which postulates that emotions consist of synchronized components: appraisals, physical reactions, expressions, feelings, and action tendencies (Scherer 2005). The use of different emotion terms may depend on social contexts, cultures, or languages, so in some cases it can be more accurate to measure specific and more concretely presented emotion features instead of using emotion terms. In practice this means that instead of asking "did you feel ashamed", respondents could be asked to evaluate the extent to which certain emotion features describe their experiences. For example, "did you think that you are a worthless person", "did you blush", or "did you think that others evaluated you negatively".

4.1 Scenario-based measures

Scenario-based approaches for measuring guilt- and shame-proneness operate based on the componential emotion theory: respondents evaluate their likelihood of reacting in specific ways in a set of hypothetical scenarios (Cohen et al. 2011; Fontaine et al. 2006; Tangney and Dearing 2002). The average of certain types of reactions across scenarios is interpreted to reflect personality traits. Usually the effect of the content of scenarios is not considered in the analyses (one exception being Fontaine et al. [2006]). The choice of reactions is also often very limited. A widely used scenario-based instrument for measuring guilt and shame proneness, The Test of Self-Conscious Affect (TOSCA [Tangney and Dearing 2002]), is based on the differentiation between self-focus and behavior-focus: Guilt means focusing on one's specific wrongdoings, whereas shame means focusing on one's worthless and inferior self (Lewis 1971; Tangney and Dearing 2002; Tracy and Robins 2007). According to this approach, guilt motivates focusing on others well-being and correcting one's wrongdoings, whereas shame, due to its painfulness, motivates defensive reactions such as withdrawal or externalization, and relates more closely to psychopathological symptoms (Tangney and Dearing 2002; Tangney, Stuewig, and Mashek 2007). Accordingly, the TOSCA guilt scale includes items about accepting responsibility and wanting to repair,

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while the shame scale includes negative self-evaluations, wanting to disappear and feeling negatively evaluated by others. Tangney suggests that this approach helps to differentiate guilt and shame better than the term-based approach, because people often use words *guilt* and *shame* inconsistently and interchangeably (Tangney and Dearing 2002). Studies using the TOSCA have shown that shame-proneness appears to be a more maladaptive trait than guilt-proneness, because it relates positively to negative characteristics such as depression (Kim, Thibodeau, and Jorgensen 2011) and aggression (Stuewig et al. 2010; Tangney et al. 1992). Also, the developmental processes affecting guilt- or shame-proneness have gained researchers' attention, and studies have shown that particularly shame-proneness develops when children experience abuse (Stuewig and McCloskey 2005).

4.2 Criticism towards the TOSCA measure

The TOSCA has faced some criticism. Luyten, Fontaine, and Corveleyn (2002) analyzed the TOSCA with principal component analysis, and found that the strongest loadings on the guilt factor referred to reparative behavior, whereas the items having the strongest loadings on the shame factor referred to low self-esteem. Therefore, it can be concluded that the difference between guilt- and shame-proneness is probably explained by the difference between tendencies towards prosocial behavior and negative self-focus. Giner-Sorolla, Piazza, and Espinosa (2011) showed experimentally that TOSCA guilt did not predict emotional reactions in a manipulated wrongdoing situation, but that it did predict reparative actions. On the other hand, TOSCA shame predicted feelings of guilt, shame, and other self-critical emotions, but it did not predict compensatory action. They suggest that TOSCA guilt measures prosocial behavioral tendencies instead of guilt-proneness as an emotional trait, and therefore studies using the TOSCA have shown guilt as a clearly more adaptive trait than shame. Consistent with this view, trait measures using general emotion statements and respondents' ratings of how often they experience the described emotions in general, have shown that guilt and shame appear less different in terms of their adaptive value when measured in this way. These measures include items such as "Feeling you deserve criticism for what you did" and "Feeling disgusting to others" (Personal Feelings Questionnaire-2 [Harder and Zalma 1990: 732]) and "I can't stand the idea of hurting someone else" (Interpersonal Guilt Inventory [O'Connor et al. 1997: 80]). Using this approach, Harder (1995) found that both guilt and shame had substantial correlations with psychopathology, but there were small differences in the strength of these associations. Shame was more related to depression and obsessive-compulsiveness than guilt, whereas guilt had stronger associations with anger and hostility than shame. It could be that a general tendency for hostility causes guilty feelings, and therefore that guilt and hostility are related, at least when guilt is measured by general statements instead of hypothetical scenarios. Also, O'Connor et al. (1997) found that the TOSCA shame scale and their measure of interpersonal guilt both related positively to depression and traumatic childhood experiences. In conclusion, generalized guilt may be more maladaptive than guilt reactions in specific contexts.

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4.3 Situational reactions vs. personality

Personality research has cast shame in a much more negative light than the research focusing on emotional states. Does this mean that self-conscious emotions have different implications as personality traits than they do as reactions within specific situations? Fontaine et al. (2006) studied the structure of guilt and shame features in Belgium, Hungary, and Peru with an instrument including 14 scenarios and 24 reaction options for each scenario. They analyzed the data with multidimensional scaling, separately for person variance and situation variance. They found that the structures were highly comparable across cultural groups, but that the person and situation structures were different. At the situation level, guilt and shame were differentiated according to the internal-external dimension (the term *shame* was situated close to items like feeling embarrassed and gazed at), but guilt was also split into interpersonal (e.g., repairing) and intrapersonal (e.g., rumination) orientation. At the person level, there was a clear distinction between negative, defensive self-focus, and reparative behavior-focus, consistent with the findings of Tangney and Dearing (2002). However, in this study, the average across scenarios was interpreted to reflect personality, and there were no direct questions about how the person generally thinks or behaves. Considering these findings, it may be that shame really is maladaptive as a personality trait, but when viewed as a situational reaction, the picture is more complex.

5 *Shame* and closely related emotion terms: *humiliation* and *embarrassment*

While shame and humiliation are self-conscious emotions that differ in important ways, they have often been seen as synonyms. It has been argued that aggression, when attributed to shame, could be caused by feelings of humiliation (Elison and Harter 2007) or rejection (Gausel and Leach 2011). Rejection and humiliation mean that the person feels that other people present in a situation treat him or her in a demeaning and unjust way. Elison and Harter define humiliation as "a highly intense emotional reaction to the context of having been lowered in the eyes of others" (Elison and Harter 2007: 314). They have demonstrated, in a series of studies, that the meaning of *humiliation* is interpreted differently from guilt, shame and embarrassment. First, humiliation is often seen to occur in serious situations, in which one believes that a violation reflects one's personality, whereas embarrassment is usually associated with awkward but less severe situations. The key difference between humiliation and guilt or shame is that humiliation requires the presence of a hostile audience in a situation, whereas guilt or shame can be felt also alone and when no others know about the cause of the emotion. Elison and Harter (2007) suggest that the feeling of humiliation is more likely to cause aggression than other self-conscious emotions, such as shame and embarrassment, because it is easy to direct the emotion toward hostile others instead of toward oneself.

Silfver-Kuhalampi et al. (2015) tested how guilt, shame and humiliation appraisals related to different action tendencies in self-reported emotion episodes. They found that humiliation (e.g., "Others degrade me") was most closely related to aggressive behavioral

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tendencies, whereas guilt strongly motivated reparative behaviors. Shame, measured by global negative appraisals of self, was weakly related to both aggression and reparation. The results were very similar across four samples of students from Finland, Belgium, Argentina, and Portugal. These results support the notion that humiliation is the self-conscious emotion that is most likely to motivate aggressive reactions. However, it is still possible that shame-prone individuals are often prone to humiliation and may view others as hostile even when they are not.

There are only a few studies concerning the differences between shame and embarrassment. Tangney et al. (1996) studied American students' experiences of guilt, shame and embarrassment and found that embarrassment differed from guilt and shame considerably. Embarrassment arose from trivial and humorous events, was experienced in front of others, was less painful and intense than guilt or shame, and did not involve any sense of moral transgression. According to Keltner and Buswell (1997), embarrassment arises from breaking conventional rules, and the embarrassed person typically reacts in a submissive and affiliative way. However, it seems that this distinction does not occur in all languages. Van Osch, Breugelmans, and Zeelenberg (2013) showed in their study that the Dutch word *schaamte* refers to both shame and embarrassment. Silfver, Fontaine et al. (unpublished manuscript) studied students' self-conscious emotional experiences in 20 cultures and found separate factors for negative appraisals of the self and physiological reactions and gestures, such as blushing and lowering the head. The word *embarrassment* (and its translations in different languages) loaded strongly on the physiological reactions factor, whereas the word *shame* and its translations loaded on both factors. It seems that shame and embarrassment can be differentiated based on emotion features, although they are not clearly differentiated in all languages.

6 Cultural differences in guilt and shame

The vocabulary related to self-conscious emotions differs across languages (Edelstein and Shaver 2007). For example, in Chinese there are five different shame concepts (Bedford and Hwang 2003), whereas in Indonesian there is only one word, *malu*, which refers to shame, disgrace, and mortification (Shaver, Murdaya, and Fraley 2001). However, there is evidence that the emotion processes are surprisingly similar in different cultures, regardless of the number of different emotion terms used in a culture's language(s). Frank, Harvey, and Verdun (2000) found factors corresponding to the five Chinese shame concepts in American data, even though there are no separate concepts for different types of shame in English. Breugelmans and Poortinga (2006) studied the Raramuri Indians in Mexico, who use only one word for guilt and shame. They found that the Raramuri nevertheless differentiate between shame and guilt characteristics, in a comparable way to cultural groups that use separate words for these emotions.

6.1 Results from scenario-based and term-based studies

There is very little empirical evidence of possible cultural differences in experiencing and processing guilt and shame. In general, a vast majority of studies concerning guilt and

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shame have been done within a single cultural group. However, there are some studies that have compared different cultural groups with the TOSCA. The factor structure of this measure has been found to be largely replicable in different cultures, but the averages of guilt- and shame-proneness have been somewhat different (Furukawa, Tangney, and Higashibara 2012; Silfver 2007b). For example, shame-proneness has been found to be higher in Japan than in the US (Bear et al. 2009; Furukawa, Tangney, and Higashibara 2012). Also, the association between shame-proneness and anger or aggression has been replicated across cultures (US vs. Japan [Bear et al. 2009]; US vs. Korea vs. Japan [Furukawa, Tangney, and Higashibara 2012]) although the strength of the associations has been found to vary somewhat.

When using the term-based approach, some cultural differences have also been observed. Eid and Diener (2001) found that *guilt* was seen as a more desirable emotion in collectivistic cultures than in individualistic cultures (comparing China, Taiwan, US, and Australia). However, Markus, and Kitayama (1991) suggest that guilt would have different antecedents in cultures with independent and interdependent self-construal. Based on empirical results by Stipek, Weiner, and Li (1989), they argue that in cultures with independent self-construal, guilt would be more about violating a law or a moral principle, whereas in cultures with interdependent self-construal, guilt would be more about hurting others. This conclusion is not exactly consistent with the results by Stipek, Weiner, and Li (1989): they compared Chinese and American respondents, and the Americans indeed considered violating a law or a moral principle as a cause of guilt more often than the Chinese did, but there was no significant difference when considering hurting others as a cause of guilt.

6.2 The meanings attached to the terms guilt and shame

Wallbott and Scherer (1995) studied written descriptions of respondents' guilt and shame experiences in 37 countries. First, respondents were asked to write about one episode of guilt and one episode of shame they had experienced. After writing the descriptions, they were asked to rate their experiences according to different features. In so-called collectivistic cultures that were high in power distance and uncertainty avoidance (value dimensions by Hofstede [2001]), shame episodes were evaluated as rather acute, short-lived emotional experiences compared to the same evaluations in individualistic cultures (shorter duration, less trophotropic arousal [= lump in the throat, stomach troubles, crying/sobbing], fewer negative influences on self-esteem and relationships, more laughing/smiling, higher felt temperature). For guilt experiences on the other hand, clear cultural differences were not found. In general, guilt was evaluated as a more internal experience that reflected a sense of moral transgression, and it was attributed primarily to the self. Shame experiences were found to be more like guilt experiences in cultures that were more individualistic and lower on power distance and uncertainty avoidance. One could say that in collectivistic cultures, shame more closely resembles embarrassment. It is possible that the emotion terms used in the study may explain these results. For example, Hurtado de Mendoza et al. (2010) studied the characteristics associated with the English word *shame* and the Spanish word *vergüenza*, which is typically used as a translation for 'shame'. They found that *vergüenza*

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was very embarrassment-like, referring to public, awkward situations, whereas *shame* was seen to imply moral transgressions.

Silfver-Kuhalampi et al. (2013) studied cultural differences in the meaning of the words *guilt* and *shame* (translated to local languages as closely as possible) in 27 countries. They found that the emotion features associated with guilt and shame were largely replicable across countries. *Guilt* was associated with a concern for others and a tendency to set things right, whereas *shame* was characterized by feeling exposed and wanting to withdraw from the social situation, although there were some cultural differences. For example, a desire to withdraw was seen to characterize shame more in cultures with low power distance. It is therefore possible that withdrawing from a social situation is more difficult in hierarchical cultures.

In conclusion, the empirical evidence so far suggests that the structure of different self-conscious emotion features would be largely similar in different cultures, although vocabulary of emotion words may differ, and translation-equivalent emotion terms may have slightly different meanings.

7 Conclusion

There are several studies showing that the vocabulary related to self-conscious emotions varies a lot in different languages. For example, the distinction between *shame* and *embarrassment* does not exist in all languages. In addition, the meanings that are associated with certain emotion words are sometimes different (e.g., the translation equivalent terms *shame* and *vergüenza*; Hurtado de Mendoza et al. 2010). Therefore, cross-cultural psychological research cannot rely solely on emotion terms. Instead, the componential emotion theory may offer a useful basis for comparing cultures. Studies using this framework suggest that there are small cultural differences in how strongly certain self-conscious emotions are experienced and how those emotions are managed, but the similarities between cultures outweigh the differences.

According to recent research, processing self-conscious emotions is strikingly similar across cultures and languages. Typically, shame consists of global negative evaluation of the self, real or imagined public exposure of negative aspects of the self, and a feeling of not living up to one's own standards and aspirations. Guilt, on the other hand, is associated with a negative evaluation of a specific behavior, a feeling of violating internalized moral principles, a feeling of violating moral norms and obligations, and a willingness to set things right and maintain harmony in interpersonal relationships. Guilt often motivates prosocial behavior and making amends, although long-lasting unresolved guilt can relate to psychological symptoms including depression (O'Connor et al. 1997). Shame has usually been associated with psychological problems and tendencies to withdraw or react aggressively. However, some studies suggest that shame is particularly maladaptive when it includes feelings of being rejected and humiliated by others. On the other hand, well-managed shame can motivate pursuing the ideal self and the values one considers important.

In the future it would be interesting to study how coping with self-conscious emotions is facilitated or hindered through language action in social situations, and whether cultural

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differences can be observed. It is likely that things that other people say can affect the feelings of guilt and shame considerably. For addressing this question, both psychological and linguistic approaches can be fruitful.

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Zhengdao Ye

54 Cross-cultural conceptualisations of happiness

1 Overview
2 Global happiness studies: a new science
3 The critical role of self-reporting in global "happiness" research
4 Methodological issues in happiness studies
5 Case studies: English, Danish, and Chinese
6 Cross-linguistic conceptualisations of "happiness": the role of culture
7 Concluding remarks
8 References

Abstract: This chapter provides an overview of the linguistic studies of cross-cultural conceptualisations of "happiness", focussing on methodological issues and research findings. It first gives a general, contextual account of recent multidisciplinary approaches to global happiness studies and how this field of research has become a new science. It then discusses the critical role of language and self-reporting in "happiness" research, and examines methodological problems arising from cross-linguistic studies of "happiness", and from studies of the universals and culture-specificity of emotion in general. The chapter also discusses possible solutions. In this context, the culture-independent Natural Semantic Metalanguage (NSM) approach is introduced, with illustrative examples drawn from English and Chinese. Commonalities and differences between the NSM approach and the Conceptual Metaphor Approach to emotion are also discussed. Three detailed NSM-based case studies of conceptualisations of "happiness" in English, Chinese, and Danish are discussed, as well as the role of culture in such conceptualisations. The conclusion stresses the role of language and metalanguage in discovering people's beliefs about "happiness".

1 Overview

This chapter provides an overview of the linguistic studies of cross-cultural conceptualisations of "happiness", focussing on methodological issues and research findings. Section 2 gives a general, contextual account of recent multidisciplinary approaches to the global happiness studies and how this field of research has become a new science. Section 3 discusses the critical role of language and self-reporting in happiness research. Section 4 deals with the methodological problems arising from cross-linguistic studies of "happiness", and from studies of the universals and culture-specific aspects of emotion in general. It also discusses possible solutions. In this context, the culture-independent Natural Se-

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mantic Metalanguage (NSM) approach is introduced, with illustrative examples drawn from English and Mandarin Chinese (hereafter Chinese). Commonalities and differences between the NSM approach and the Conceptual Metaphor Approach to emotion are also discussed. Section 5 details NSM-based case studies of "happiness" concepts in a number of languages, with a particular focus on English, Chinese, and Danish. Section 6 discusses the role of culture in these conceptualisations. The conclusion stresses the role of language and metalanguage in discovering people's beliefs about "happiness".

2 Global happiness studies: a new science

Over the last three decades, happiness studies has become one of the fastest-growing fields of research, attracting scholars from disciplines as diverse as psychology, philosophy, history, psychology, sociology and economics. The emergence of this new discipline is, for example, reflected in the creation of the interdisciplinary *Journal of Happiness Studies* in 2000, the publication of the special issue on "Happiness" in *Daedalus*, the flagship journal of the American Academy of Arts and Sciences (2004), and an explosion in the number of scholarly books and articles devoted to the topic on "happiness" and subjective well-being (SWB) (e.g. Diener, Lucas, and Oishi 2001; Diener and Suh 2002; Layard 2003, 2005; McMahon 2006; Frey 2008, 2018; Mathews and Izquierdo 2008; Bok 2010).

In their (2001) paper entitled "Subjective well-being: the science of happiness and life satisfaction", the comparative social psychologist Ed Diener and his colleagues remark: "the scientific study of subjective well-being is now poised to grow into a major scholarly and applied discipline" (Diener, Lucas, and Oishi 2001: 64). What they call "the scientific study of subjective well-being" is no longer a prediction but now reflects how many scholars conceptualise the field. By 2005, for instance, the economist Richard Layard expounded what he called a "new science" in his seminal book *Happiness: Lessons from a New Science* (Layard 2005). Undoubtedly, the linking of happiness to a nation's growth and productivity has attracted many economists to this field (e.g. Helliwell, Layard, and Sacks' *World Happiness Report* [2013, 2019]). Happiness studies has been incorporated into the broad field of the social sciences.

3 The critical role of self-reporting in global "happiness" research

Since language provides direct access to the subjective experience of people, interpreting and assessing the quality of other people's subjective experience necessarily depends on self-reports of one kind or another. As David Myers states plainly in his book *The Pursuit of Happiness*, "if you can't tell someone whether you're happy or miserable, who can?" (Myers 1992: 27). Therefore, despite the attempt to make it a science and call it the "scientific study of happiness", psychologists, sociologists and economists have no other means but self-reports to access people's subjective experience and their inner life. For example,

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Layard writes: "The most obvious way to find out whether people are happy in general is to survey individuals in a random sample of households and ask them. A typical question is, 'Taking all things together, would you say are you very happy, quite happy, or not very happy?'" (Layard 2005: 14).

The critical role of self-reports in happiness studies means that understanding the meaning of words and expressions people use to talk about their subjective experience is of vital importance, and *a priori*, to meaningful "happiness" research and the study of human conceptualisation of subjective experience.

4 Methodological issues in happiness studies

Since global "happiness" research involves consultants from many nations and countries, researchers must also be able to fully understand the "happiness" talk in a given culture, and adequately deal with the issues of translation and meaning equivalence. These issues are discussed in Section 4.1, followed by a general exposition of the need for a metalanguage which can serve as a common measure for the comparison of meaning across languages (Section 4.2). In that context, the NSM approach to the happiness studies is introduced and illustrated with examples from English and Chinese.

4.1 The issue of meaning comparison

Global happiness research necessarily involves translation. This translation comes in two forms: one is the translation of local terms and expressions into English, the lingua franca of the international science community; the other is the translation of English-based questionnaires into local languages. In either form, it often comes down to the question of whether the word "happy" means the same thing in different languages. If not, it obviously points to different conceptions of "happiness", which then need to be articulated, and whose nuances must also be fully understood. Only in this way can researchers gain a genuine picture of what "happiness" means to a local speech community, and meaningfully compare interview data and statistics.

Researchers generally recognise that cross-linguistic comparability of happiness vocabulary can be a problem. For example, Layard (2003) writes: "Of course, one could question whether the word 'happy' means the same thing in different languages. If it does not, we can learn nothing by comparing different countries" (Layard 2003: 16).

Although the issue of meaning equivalence is often acknowledged by scholars, the solution they offer is simply back translation. For example, Diener et al. (1995) has this to say: "[i]n South Korea and PRC, the questionnaires were translated into the vernacular by bilingual speakers who were native speakers of those languages. In the case of certain SWB measures, a translation and back translation method was used" (Diener et al. 1995: 16). However, from a semantic point of view, back translation does not guarantee meaning equivalence (e.g. Wierzbicka 2004; Ye 2016). True equivalence in meaning has to be established on empirical grounds, on the basis of delicate and detailed meaning comparison.

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Without such careful investigation of meaning, a given translation or back translation is merely a *supposed* equivalent.

4.2 The need for cross-translatable words in global happiness studies

The issue of meaning equivalence pertains not just to global happiness studies. It is critical to cross-linguistic investigation of subjective experience in general. Without self-reports, researchers can know little about people's own experience and their attitudes towards it. As Barrett et al. aptly put it, self-reports are "essential for revealing the ontological structure of consciousness" (Barrett et al. 2007: 377). In order to ascertain the extent of similarities and differences in the meanings of words across different languages, one needs a culture-independent metalanguage for speaking about human feelings and associated thoughts. Researchers need a culturally neutral semantic metalanguage which not only is capable of unpacking meanings but also serves as a common yardstick for comparing those meanings.

One can turn to the field of linguistics, particularly semantics, to look for such a metalanguage. So far, what is known as the Natural Semantic Metalanguage (NSM), developed by Anna Wierzbicka, Cliff Goddard and their colleagues, is the only available metalanguage that can meet both of the needs mentioned above (e.g. Wierzbicka 1972, 1996; Goddard 2011). This is because the metalanguage, which is made up of 65 semantic primes, represents the most basic level of meaning, and at the same time, is translatable across languages. These semantic primes can be thought of as intersections of all languages. Table 54.1 lists the exponents of the 65 semantic primes in English.

Tab. 54.1: Semantic primes (English exponents), grouped into related categories (after Goddard and Wierzbicka 2014).

I, YOU, SOMEONE, SOMETHING~THING, PEOPLE, BODY	substantives
KINDS, PARTS	relational substantives
THIS, THE SAME, OTHER~ELSE	determiners
ONE, TWO, SOME, ALL, MUCH~MANY, LITTLE~FEW	quantifiers
GOOD, BAD	evaluators
BIG, SMALL	descriptors
KNOW, THINK, WANT, DON'T WANT, FEEL, SEE, HEAR	mental predicates
SAY, WORDS, TRUE	speech
DO, HAPPEN, MOVE	actions, events, movement
BE (SOMEWHERE), THERE IS, BE (SOMEONE/SOMETHING)	location, existence, specification
(IS) MINE	possession
LIVE, DIE	life and death
WHEN~TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME, MOMENT	time
WHERE~PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE, TOUCH	place
NOT, MAYBE, CAN, BECAUSE, IF	logical concepts
VERY, MORE	augmentor, intensifier
LIKE	similarity

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The 65 primes have been identified through extensive empirical investigations of typologically different languages over five decades (see e.g. Wierzbicka 1972, 1996; Goddard and Wierzbicka 1994, 2002; Peeters 2006). In theory, there is a sub-set of every language that matches in meaning across all languages; and this mini-language within each language is also governed by a universal grammar.

As indefinables (lexemes whose meaning cannot be further defined), the semantic primes function as building blocks of complex meanings in that any complex ideas can be decomposed into, and represented by, primes through paraphrases. For example, the meanings of the English emotion terms *pleased* and *delighted* can be paraphrased as follows (based on Wierzbicka [1999: 56–57] and Goddard [2018: 73, 75], with modification):

[A] semantic explication of English *pleased*
She was pleased (at that time):
(a) this someone (=she) thought like this (at that time):
(b) "something good happened
I wanted this"
(c) because of this, she felt something good
like people can feel when they think like this

[B] semantic explication of English *delighted*
She was delighted (at that time):
(a) this someone (=she) thought like this (at that time)
(b) "I know now that something very good happened
I didn't know before that it would happen"
(c) because of this, she felt something very good
like people can feel when they think like this

These explications achieve two things. First, they spell out the typical thought processes associated with the respective feelings of *pleased* and *delighted*. Second, they make it clear where the differences lie between the two. While both are positive emotions in response to a particular event, *delighted* implies much stronger "arousal" ("feel something very good") stemming from the thought that the event is "very good" and unexpected ("I didn't know before that it would happen").

Take the Chinese emotion terms *xǐ* and *lè* as another example. Both terms are regarded as expressing basic emotions in Chinese culture and philosophical tradition. Their meanings can be paraphrased as follows (based on Ye [2006] with modification):

[C] semantic explication of Chinese *xǐ* ('festival joy')
(a) someone X felt something very good at this time, like people can feel when they think like this:
(b) "something very good is happening to me now
because something good happened now
I did not know that something like this would happen to me
I want this to be happening to me
I want to do something now because of this
I want to do something with some part of my body now"

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[D] semantic explication of Chinese *lè* ('attainable enjoyment/contentment')
(a) someone X felt something for some time, like people can feel when they think like this:
(b) "something very good is happening to me now
because someone is doing something
I wanted this to be happening
I want this to be happening for some more time
because of this, I want to do something
I don't want to think about other things now"

As Ye (2006: 76) points out, these two Chinese basic emotion terms seem to suggest that in Chinese people's conceptualisation of human emotional experience in relation to good events, there are two complementary aspects: one is due to an external force, somewhat mysterious, to which the experiencer actively responds, experiencing a momentary, intense feeling "stirred" by external stimuli; and the other is rooted in human effort. Each aspect is culturally salient, and deserves a place in the small set of Chinese "basic emotions".

Once the meanings of these Chinese emotion terms are stated in NSM, not only can they be made accessible to people from other languages and cultures, but cross-linguistic comparison can be carried out by using a common yardstick.

It is clear from the explications that *xǐ* and *lè* are emotional responses to very positive *personal* events ("something very good is happening *to me*"), an element absent in either *pleased* or *delighted*. Despite the fact that *xǐ* is glossed as 'festive joy' here, one would hesitate to equate it with the "surprise-free", impersonal *joy*.

Explications [C] and [D] show that *xǐ* differs from English *pleased* also in that it doesn't involve a pre-mediated goal ("I wanted this"). *Delighted* may be closer in meaning to *xǐ*, especially given that both contain an element of "surprise". However, *delighted* lacks a strong "personal interest" ("to me") and "action tendency" ("I want to do something now"), which renders it a "lighter" and less jubilant emotion than *xǐ*.

Lè seems to have components which overlap with many "happy"-related words in English, such as *pleased*, *enjoyment*, and *contented*. However, the differences between *lè* and these terms are also striking. *Lè* is more than just being pleased with what one wanted to happen. It contains the thought of not wanting the event to stop and wanting to do something to keep it going. It is true that *lè* is closely associated with 'contentment' and being 'carefree'. But in it, the "contentedness" hinges on "thinking" ("I don't want to think about other things"), whereas in English the word *contented* places its emphasis on the "volitional" aspect – "I do not *want* other things now". The "contentedness" of *lè* results from one's enjoyment, not from what one has or what happens to oneself as in the case of *contented* (see Explication [F] in Section 4 for the meaning of English *contented*). The element of "do" is reminiscent of *enjoyment*/*enjoy*, but its meaning is much narrower than *lè*.

Explications [A] to [D] all employ a particular technique to describe the meaning of emotion words. They all centre on portraying the prototypical thought scenarios with which the relevant emotions are typically associated. This semantic technique, developed in the 1970s by Anna Wierzbicka, offers a linguistic solution to articulating seemingly inexplicable emotional meaning encoded in words and expressions, and avoids circularity in meaning explanation (that is, glossing a term with its synonyms) (see Wierzbicka 1972, 1973, 1999, 2009). This means that, in the NSM approach to emotion studies, the important

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tasks for researchers are to identify the prototypical cognitive scenario encoded in a given emotion term by examining the range of its use, and to state it in simple and universal semantic primes. The universality of the semantic primes and their combinatorial behaviour ensure maximum translatability of emotion concepts between languages while ensuring that cross-linguistic comparisons are carried out on a common basis.

It should be pointed out that the clearly stated explications are the results of a long experimentation process, during which meaning components are proposed on the basis of a careful examination of the usages and collocational patterns of a given word in corpora. Acceptability tests are then conducted to check the validity of each component. Substitutability tests are also conducted to make sure that each component is compatible with the given context. The explications should be seen as approximations of meaning. They can be refined and revised subject to new data and contexts. The explications should also be well-formed and coherent as stand-alone texts.

The concern for a common measure in cross-linguistic study of emotions, and in cross-linguistic study of conceptual domains in general, distinguishes the Natural Semantic Metalanguage theory from the Conceptual Metaphor Theory (CMT) (e.g. Lakoff and Johnson 1980; Kövecses 1990, 2000). On the one hand, both theories take a cognitive stance to meaning, that is, they both are interested in uncovering the conceptualisations embodied in words and conventionalised expressions, and they both take meaning analysis as conceptual analysis. On the other hand, the aim of Conceptual Metaphor Theory is to identify the underlying conceptual metaphors that enable the mapping between the physical source domains and the abstract target domain, as a means to explain the conceptual formation of the latter. For example, Zoltán Kövecses (1991) identifies the following metaphors for the concept of happiness:

HAPPINESS IS LIGHT (e.g. “Look on the bright side.” “He radiates joy.” “She brought a ray of sunshine into the room.”)

HAPPINESS IS DISEASE (e.g. “Her good mood was contagious.” “His laughter was infectious.”)

BRIGHT EYES STAND FOR HAPPINESS (e.g. ‘His eyes glinted when he saw the money.” “Amusement gleamed in his eyes.”)

BEING HAPPY IS BEING OFF THE GROUND (e.g. “She was on cloud nine.” “We were on top of the world.”)

BEING HAPPY IS BEING IN HEAVEN (e.g. “That was heaven on earth.” “It was paradise on earth.”)

HAPPINESS IS UP (e.g. “They were in high spirits.” “We had to cheer him up.”)

HAPPINESS IS A (DESIRED) HIDDEN OBJECT (e.g. “The pursuit of happiness is our inalienable right.” “He is striving for happiness.”)

HAPPINESS IS A VALUABLE COMMODITY (e.g. “He received a great deal of happiness from their relationship.” “Buy happiness.”)

Based on these metaphors, Kövesces (1995) offers the following list of features which he believes reflect folk knowledge of the concept of happiness:

> Happiness is a state that lasts a long time.
>
> It is associated with a positive value.

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It is a desired state.

It is pleasurable.

It gives you a feeling of harmony with the world.

It is something that you can "spread" to others.

It exists separately from you and is outside you.

It is not readily available: it either requires an effort to achieve it or comes to you from external sources.

It takes a long time to achieve it.

It is just as difficult to maintain it as it is to attain it.

(Kövesces 1995: 39)

The Conceptual Metaphor Theory approach represents one way of probing the conceptualisation of *happiness*. It is reasonable to assume that, given that the examples are all in English, the listed metaphors and features are about the English word and concept *happiness* (Kövesces doesn't specify in the paper whether the conceptual metaphors he outlines and the features he summarises are for English *happiness* or intended as universal; he simply used the word "happiness").

From the perspective of the Natural Semantic Metalanguage theory, two problems are still unresolved when happiness is described via metaphors and features. First, the target domain subsumes many related words – such as *happiness*, *joy*, and *in high spirits* – all under one label, *happiness*, although there are qualitative differences in the meanings of all these emotion words (see e.g. Wierzbicka 1999: 50–59). Second, the issue of translatability in cross-linguistic study of happiness is not addressed. The target domain, in this case *happiness*, is represented by a word specific to the English language. This word is culturally laden and, therefore, does not meet the requirement of a culture-independent metalanguage for cross-linguistic investigation.

In Section 5, the NSM approach to happiness studies is discussed, with illustrative case studies from English, Danish and Chinese.

5 Case studies: English, Danish, and Chinese

NSM remains the only linguistic theory that has engaged with the multidisciplinary study of global "happiness" and subjective well-being. By so doing, it is able to offer a linguistic perspective on the subject, and reveal different conceptualisations of "happiness" reflected in different languages and speech communities. Drawing on its well-established methods as applied to the study of the language and semantics of emotion (e.g. Wierzbicka 1972, 1973, 1992, 1999, 2004, 2009; Harkins and Wierzbicka 2001; Enfield and Wierzbicka 2002; Ye 2013), NSM scholars take a two-pronged approach to this topic. On the one hand, they place English *happy* and *happiness* under scrutiny by undertaking an intensive analysis of their meanings, contemporary or historical. On the other hand, they systematically attempt to unpack the meanings of the words' closest counterparts in non-Anglophone linguacultures in order to discover the similarities and differences in how humans conceptualise

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their experience of good events and evaluate their lives. These non-Anglophone linguacultures include Ancient Greek, Chinese, Danish, French, German, Italian, Russian, and Tibetan (see Wierzbicka 2004, 2011; Levisen 2012; 2016, Goddard and Ye 2016; Ye 2016). In this section, I will draw on Wierzbicka (2004), Levisen (2016) and Ye (2016) to illustrate the different conceptions of "happiness" reflected in English, Danish and Chinese.

5.1 *Happy* and *happiness* in contemporary English

The adjective *happy* has a very high frequency of use in present-day English. It is often the base word upon which survey questions concerning subjective well-being rest. In NSM terms, the meaning of *happy* can be portrayed as follows (based on Goddard and Wierzbicka [2014: 103]):

[E] semantic explication of English *happy*
He was happy (at that time):
(a) this someone (=he) thought like this for some time at that time:
(b) "many good things are happening to me now as I want
I can do many things now as I want
this is good"
(c) because of this, he felt something good at that time
like people can feel when they think like this

Explication [E] captures three characteristic features of *happy*. First, it is personal and self-oriented, about things that happen "to me". Second, the attention of the experiencer is not focussed on one particular event but is directed at an overall evaluation of one's current situation, whereby "many good things are happening to me as I want; this is good". Third, it conveys a sense of agency and freedom, and suggests an individual can freely pursue further wants and needs – "I can do many things now as I want". All these components contribute to a good feeling, and distinguish *happy* from *pleased* and *delighted*, and from many other emotions in English which generate good feelings, such as *joy*, a feeling that can be more publicly displayed.

The English *contented* may be closer in meaning to *happy* than other positive emotion terms, but the thoughts associated with it are not directed at one's positive evaluation of one's current situation but at "not wanting other things now".

The meaning of *contented* is spelt out in [F] for comparison (cf. Wierzbicka 1999: 54–55; Goddard 2018: 73).

[F] Semantic explication of English *contented*
She was contented (at that time):
(a) this someone (=she) thought like this (at that time):
(b) "something good is happening to me now
I want this
I don't want other things now"
(c) because of this, she felt something good
like people can feel when they think like this

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Clearly, the meaning of *happy* is qualitatively different from that of *content*.

The meaning of the noun *happiness* can be explicated in NSM terms as follows (Goddard and Wierzbicka 2014: 105):

Happiness (as in "money doesn't bring happiness")
(a) it can be like this:
(b) someone thinks like this for some time at that time:
"some good things are happening to me now as I want
I can do many things now as I want
this is good"
(c) because of this, this someone feels something good at that time
like people feel at many times when they think like this for some time
(d) it is good for this someone if it is like this

Happiness shares an identical thought configuration with *happy*. The main differences lie in components (a) and (d). The component "it can be like this" in *happiness* indicates the nominal status of the word and that it is about a person's state of mind. Component (d) reflects the positive value associated with *happiness* – "it is good for this someone if it is like this".

It is worth emphasising that Explication [E] describes the contemporary meaning of *happy*, a meaning in which the adjective is gradable and does not represent an absolute state as it did in its older meanings (e.g. Goddard and Wierzbicka 2014: 133–139; see also McMahon 2004). Goddard and Wierzbicka (2014: 119) explain that components such as "I can't want anything more" or "I don't want anything more", which are central to the older meanings of *happiness*, are replaced by "I can do many things as I want", which is more compatible with the idea of the relentless pursuit of happiness in contemporary Anglophone societies.

Now that the meanings of *happy* and *happiness* are fully stated, they can serve as reference points for cross-linguistic and cross-temporal comparison.

5.2 Danish *lykke* ('everyday well-being')

Danes are often referred to as the happiest people on earth, and Denmark the "happiest nation on earth" (e.g. Helliwell, Layard, and Sacks 2013). But is this, as the Danish semanticist Carsten Levisen questions, "a fact of life"? (Levisen 2016: 46). Levisen turns to the Danish language to look for answers. According to him, Danes were never asked about their levels of happiness; rather, they were asked about their levels of *lykke*. The word *lykke* is polysemous and open to two different interpretations – (a) the gradable *lykke* of 'everyday well-being' and (b) the non-gradable *lykke* of 'extreme positive emotion', depending on the syntactic frame in which it occurs. As Levisen writes:

> When people are asked to grade their *lykke* (How *lykkelig* are you?), they only have one frame available, namely the lykke of 'everyday well-being', because this is the only concept that allows for gradation. If, however, they are asked the question 'were you *lykkelig* yesterday?', the linguistic prediction will be that the 'the extreme positive emotion frame' will be activated. In this case, the sentence almost reads like 'Did anything fantastic happen to you yesterday'? (Levisen 2016: 51)

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Levisen describes *lykke* as being "earth-bound", in which "a person is thankful for the small things in life, such as *kaffe* ('coffee') and *ostemad* ('slice of bread with cheese')" (Levisen 2016: 53).

The meaning of *lykke*, as in the sense of "everyday *lykke*", can be explicated as follows:

[G] semantic explication of Danish *lykke*
(a) it can be like this:
(b) someone thinks like this:
"I have lived for some time
when I think about it now, I can say something like this about it:
'many good things happened to me during this time,
not many bad things happened to me during this time'
this is good, I know that it can be not like this"
(c) when someone thinks like this, this someone can feel something good because of this
(d) it is good for someone if this someone can think like this
it is bad for someone if this someone can't think like this

While both Danish *lykke* and English *happiness* include an assessment of one's life, the former is general, extending to one's life as a whole, and involves thoughts about both good things and the absence of many bad things that could have happened to the experiencer. The "contentment" also comes from experiencers' acute awareness that they can be "not like what they are". Levisen (2016) points out that this way of thinking bears connection to the older meaning of *lykke* as 'luck' and 'good fortune'. In contrast, experiencers of *happiness* do not simply see themselves as the recipient of their good life. They focus their attention on their current situation and give an overall positive evaluation ("this is good"). The thought that the experiencer's current state of being is special does not enter the meaning of *happiness*, in which the emphasis is that the experiencer's goals have been achieved and one has control over one's activities.

5.3 Chinese *xìngfú* ('the belief that one is loved and cared for')

The word *xìngfú* is central to "happiness discourse" in contemporary China. It appears not only in the official translations of Gross National Happiness (GNH) and the National Happiness Index (NHI), but also in the titles of numerous films, TV series and songs. It is an ideal that Chinese people aspire to in life. Ye (2016) conducts a detailed semantic analysis of this term based on textual examples drawn from five Chinese corpora, and compares its meaning with that of *happy*/*happiness* in English. She finds that beyond positive feeling, *xìngfú* and *happy*/*happiness* have little in common. The former is a relational concept, implying a deep sense of connection with family members or with someone with whom one is in love; whereas the latter focuses on the agency and freedom of the individual. While one's *xìngfú* is literally "out of one's hands", *happiness* can be actively pursued.

Her analysis also shows that *xìngfú* implies mutuality and expectations of what the other party should do for the experiencer. For example, people feel *xìngfú* when their parents, spouse, or children care for them.

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The full meaning of *xìngfú*, roughly glossed as 'the belief that one is loved and cared for', reads as follows:

[H] semantic explication of Chinese *xìngfú*
(a) it can be like this:
(b) someone feels something very good for some time
because this someone thinks like this at this time:
"I know that I can be with someone at many times
I feel something very good when I am with this someone
I feel something very good when I think about this someone
(c) at the same time, I know that it is like this:
this someone feels something very good towards me
this someone often thinks about me
this someone wants to do good things for me
(d) I want it to be like this"
(e) when this someone thinks like this, this someone feels something very good
for some time, like people feel at many times when they think like this
(f) it is very good for this someone if it is like this

Xìngfú is an absolute state, as is reflected in the opening line "it can be like this". Components (a) and (e) set up the frame for the prototypical cognitive scenario of *xìngfú*, which is specified in (b)–(d). Components in (b) describe the experiencer's feeling towards the other party, attempting to capture a sense of trust and attachment. It forms the basis of the experiencer's expectations of the other party, which are fully spelt out in (c). It should be pointed out that the components in (b) and (c) are presented in a near-symmetrical way, so as to reflect the relational and mutual aspects expressed by *xìngfú*. The only asymmetrical thought element is "this someone wants to do good things for me", expressed the final line in (c). This line reflects that the dependent nature of *xìngfú* – one's own feelings towards the other party alone do not guarantee *xìngfú*. Confidence in the other's care is, therefore, crucial to the overall semantic picture of *xìngfú*. Second, both (b) and (c) begin with "I know", indicating that *xìngfú* is sustained by the beliefs of the experiencer, who is highly conscious of what makes oneself *xìngfú*. Component (d) expresses the experiencer's desire to attain *xìngfú*, leaving open whether or not it can be attained. Component (f) stresses that *xìngfú* is a highly cherished value for many people and can be regarded as an ideal.

6 Cross-linguistic conceptualisations of "happiness": the role of culture

The explications presented above ([F] to [H]) illustrate how Natural Semantic Metalanguage functions as what Leibniz calls the *tertium comparationis*, a common measure, for comparing meanings across different languages. Such cross-linguistic comparisons are enabled, in the first place, by full elucidation of the prototypical cognitive scenarios encoded in each of the local terms, which is made possible also by the use of the metalanguage.

What is clear from these explications is that conceptualisations of what people consider to be a good state of being vary from language to language. Perhaps it is not surprising

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to see the dramatic differences in such conceptualisations between English and Chinese because of the expected linguistic and cultural distance between the two. But the striking differences in the prototypical cognitive scenarios between English and Danish, two closely related languages, only highlight the role of culture in shaping the different conceptualisations of "happiness". What is reflected in these different configurations of meaning, as portrayed in [F] to [H], is in fact the cultural values, orientations and concerns distinctive to each linguaculture.

The prototypical cognitive scenario of English *happiness* reveals a culture which values individual freedom and a goal-oriented way of thinking. The Danish linguaculture is one which discourages materialism and encourages an appreciative attitude towards life and the small things in life. Levisen (2016: 61) ascribes the Danes' often portrayed "lack of ambition" to such culturally encouraged attitudes. The Chinese usage clearly points to a culture where social relations and family are of central importance to its people, and where actions are valued over speaking. In other words, all of the different conceptualisations in question reflect different "cultural scripts" for thinking about what matters to an individual's quality of life. These scripts afford insights into the underlying cultural models that inform such ways of thinking. Thus, NSM can be said to be an indispensable tool for researchers to unravel the insider's perspective on what it means to be "happy" and have a good life, and to fruitfully explore the nexus between "happiness" concepts and the underlying cultural forces that shape them. This insider's perspective can be of great importance. As Ye (2016) shows, a deep understanding of the links between the conception of Chinese *xìngfú* and the underlying cultural values, which is made possible through a fine-grained semantic analysis and the exclusive use of cross-translatable words, can help researchers to answer some puzzling questions arising from survey results on subjective well-being involving Chinese consultants.

7 Concluding remarks

This chapter has presented recent linguistic research on cross-cultural conceptualisations of "happiness" by placing it in the broader context of the fast-growing, emerging field of happiness studies. It highlights the critical role of language and metalanguage in the global study of "happiness" and subjective well-being, and introduces the NSM approach to cross-linguistic meaning analysis and comparison, which provides a solution to the methodological problems concerning translation and meaning equivalence. The chapter also illustrates the extent of cross-cultural differences in conceptualisations of "happiness" and the intrinsic relationships between cultural values and such conceptualisations by presenting three case studies – English *happiness*, Danish *lykke* and Chinese *xìngfú*.

These case studies show that the English word *happiness* is as untranslatable and culturally specific as the Danish *lykke* or Chinese *xìngfú*. Using *happiness* to portray the emotional life of speakers from other cultures can easily gloss over important cultural differences and limit researchers' imagination about diverse ways in which people think about human goals, concerns and their desire for a good life. However, by using the Danish *lykke* or Chinese *xìngfú* as the meta-category to think and talk about human "happiness", one

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would fall into the same trap as by using the English *happiness*. No "happiness" words in any human languages are capable of serving as a culturally neutral metalanguage because they are inseparable from the deeply embedded, often invisible, cultural values, beliefs and attitudes. Fruitful and meaningful investigations of cross-cultural conceptualisations of "happiness" can only take place if researchers consciously use cross-translatable, culturally neutral words, such as "people", "feel", "think", "good" and "bad". In so doing, they can position themselves within a culture and unpack local meanings from that culture's perspective. The three case studies in this chapter show that the cross-translatable Natural Semantic Metalanguage and the techniques that its researchers have developed for studying emotions could be a versatile and highly calibrated tool for global happiness studies, and for the study of the universality and culturally specific aspects of human conceptualisation of "happiness".

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Bee Chin Ng and Hongyong Liu

55 Disgust as an emotion in a cross-linguistic approach

1 Introduction
2 Psychological studies of disgust
3 Linguistic studies of disgust
4 Disgust in Mandarin Chinese
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Abstract: This chapter investigates the conceptualization and verbalization of the emotion of disgust in the literature, detailing the difference between basic disgust and social and moral disgust. It tracks the discussion of disgust as a basic emotion and draws analogies from the comparison of disgust with other emotions. The discussion will review the literature on disgust drawn mainly from psychology, philosophy, and anthropology. In particular, the range of the disgust lexicon will be evaluated. As linguistic and cross-linguistic research on disgust is limited, we will focus on the language ramifications of the disgust lexicon by looking at disgust-related emotion words in the *Modern Chinese Corpus*. We identify and categorize the available information about emotion-eliciting antecedents expressed in the linguistic context using an existing corpus. The examination of how the emotion of disgust is expressed in the Chinese corpus data leads us to the conclusion that near-synonyms of disgust-related emotion words in Chinese can refer to different types of disgust, ranging from core disgust to moral disgust, which can be differentiated by looking at the emotion-eliciting antecedents in the linguistic context. It is also found that some disgust-related emotion words can be used to express a range of related emotions with the same action tendency of avoidance in Chinese. This chapter highlights the importance of a detailed and nuanced linguistic analysis that accounts for the semantic shades of DISGUST words. While a large number of emotion expressions across different languages can be said to express the same emotion DISGUST, it is clear that each of them is used in a specific way that conveys cultural significance not easily apparent even to proficient speakers. In our discussion, we try to show that a close examination of disgust expressions is important in the cross-cultural understanding of disgust as a concept.

1 Introduction

This chapter explores the emotion of *disgust*. Starting from a review of existing studies of disgust, we draw out the main trends in its explications, and it appears that, up to now,

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most studies of disgust emerge from the field of psychology. As such, we know very little about the current body of knowledge regarding disgust in linguistics. Additionally, most research on disgust conducted so far has been in the West, with very few conducted in non-Western contexts. This is problematic given the culture-specific nature of disgust. The literature is at least unified in recognizing that despite being a universal emotion, disgust is experienced differently according to one's culture. This chapter will focus on the cultural relativity of disgust as a concept, highlighting the discussion of cultural specificities identified in the literature. This will be done by drawing a detailed analysis of disgust expressions in Mandarin Chinese to illustrate the importance of paying close attention to linguistic aspects in the understanding of disgust as an emotion. Our analysis shows that there is no one-to-one mapping between disgust and disgust expressions in Chinese. Disgust, like many other emotions, is another example of how the affective space is delineated differently in different languages. Expressions that are used to encode disgust in Chinese are highly polysemous, expressing a mix of emotions (typically negative) rather than disgust alone. In the conclusion, we highlight the importance of this bottom-up analysis of understanding disgust through the evaluation of its semantic distribution.

1.1 Definition of disgust

Disgust has been categorized as one of the seven basic emotions, and this idea was first conceptualized and identified by Darwin ([1872] 1965). It later gained support from many researchers, who noted that disgust displays the characteristics expected of a basic emotion. As is the case with other basic emotions, disgust is typically associated with a specific facial expression (Ekman and Friesen 1975). Ekman (1992) notes that "only one muscle is needed to signal disgust clearly", which is the "levator labii superioris, alquae nasi, which raises the nares, pulls up the infraorbital triangle, and wrinkles the sides of the nose" (Ekman 1992: 551) – a muscle action that only occurs in disgust and no other emotions (see images of disgust from Ekman [2022]). Apart from the characteristic facial expression, disgust also has a characteristic action, physiological manifestation, and feeling state (Rozin and Falloo 1987). The typical action associated with disgust is distancing oneself from the object of disgust, the typical physical reaction is nausea, and the typical feeling state is revulsion.

The etymology of "disgust" can be traced back to French *desgoust*, meaning 'strong dislike or repugnance'. Its association with taste happened later when it entered the English lexicon in the 1600s. In pioneering discussions on disgust, Darwin (1965) states that the term "disgust" means something which is offensive to the taste. He also points out that since the sense of smell and taste are so closely connected, it is also understandable that it should provoke retching in the same way as bad food. Darwin distinguishes between moderate disgust and extreme disgust. Moderate disgust may be exhibited by spitting or making a sound as if clearing the throat (such guttural sounds are often written as *ach* or *ugh*), while extreme disgust is usually expressed by the acts of retching or vomiting. According to Rozin et al. (2000), there are three major components to disgust. Firstly, the agent perceives that there is a threat of oral incorporation (real or perceived) of the disgust

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object (known as the elicitor). Then, the agent develops an active sense of aversion (or offensiveness). Finally, the agent evaluates the substance as a contaminant, after which they may possibly take some action to respond to the elicitor, such as withdrawal or the display of the characteristic disgust facial expression.

Rozin et al. (1999) view disgust as a guardian, guarding against offensive objects that are contaminating. In their definition, contamination sensitivity and offensiveness are two important features which differentiate disgust from other negative emotions such as dislike and anger. Contamination sensitivity refers to the largely universal tendency for humans to see as unacceptable any food that has touched a disgusting thing, even if it may still be edible. With respect to offensiveness, there is a strong degree of cultural specificity involved, as an object's level of offensiveness may differ across cultures. For example, Enfield (2001: 164) reports that rural Lao people consume different types of insects such as crickets, grasshoppers, and beetles, a practice which average urban dwellers in the West would likely find unusual and, perhaps, even abhorrent. In a similar example, most Chinese people perceive pigeons as delicacies, while Europeans find pigeons disgusting since they are simply "flying rats" and carriers of diseases. There may even be intra-group differences in reactions. In some areas in Guangdong Province of China, people often cook rats for soup, while people in other parts of China may find this practice disgusting, as rats are often carriers of infectious diseases and hence considered dirty to them. Often, the object itself is not inherently disgusting and the disgust it evokes is often determined by the context itself.

Haidt et al. (1997) divides disgust into four types based on the nature of the elicitors:

1. Core (oral) disgust (with the elicitor being food)
2. Animal-nature disgust (with the elicitor being animal-like behaviors)
3. Interpersonal disgust (with the elicitor being strangers)
4. Moral disgust (with the elicitor being moral violations)

They also argue that there is a pathway via which disgust expands from core to moral. In this schema, disgust is seen as a regulatory response which helps us avoid pollution and maintain purity in both the material and the spiritual world. This evolution of disgust is summarized in the following table by Rozin et al. (1999).

Tab. 55.1: Proposed pathway of expansion of disgust and disgust elicitors (Rozin et al. 1999).

	Disgust stage				
	Distaste	**Core**	**Animal-nature**	**Interpersonal**	**Moral**
Function	Protect body from poison	Protect body from disease/infection	Protect body and soul; deny mortality	Protect body, soul, and social order	Protect social order
Elicitor	Bad tastes	Food, body products, animals	Sex, death, hygiene, body deformity	Direct and indirect contact with strangers	Certain moral offenses

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2 Psychological studies of disgust

It has been many years since the emotion of disgust has become a subject of interest for psychologists. In recent times, the attention has mostly shifted to the moral domain, as opposed to oral (core) disgust. There has been growing evidence that moral disgust derives its origins from oral disgust (Chapman et al. 2009; Rozin et al. 2009). Other contemporary studies (Kelly 2011; La Rosa and Rosselló 2013; Chapman and Anderson 2013; Chapman and Anderson 2014) have also explored disgust in the morality domain.

When it comes to moral disgust, the boundaries between anger and disgust are sometimes unclear. In Nabi's study (2002), it was found the word "disgust" is often not pure disgust, but rather a combination of the conceptual meanings of disgust and anger, as anger was simultaneously triggered within the participants when told to recall stories that make them feel "disgust". Nabi argues that the theoretical meaning of disgust should be distinguished from its lay meaning, claiming that the lay use of the word is more apposite for describing anger, as opposed to core, basic disgust, for which subjects are more likely to use the informal slang term "grossed out" instead. On top of highlighting a link between anger and disgust in sociomoral situations, Nabi's study suggests that there is not always a one-to-one mapping between the lay perception of emotion words and the emotion itself. Nabi's findings have been supported by Simpson et al. (2006), who similarly found that sociomoral disgust elicitors trigger not only disgust, but also anger.

These findings, however, have been challenged by Chapman et al. (2009), who show that moral disgust and core disgust both evoke the activation of the same muscle region of the face (the levator labii) – a typical characteristic of the oral-nasal rejection response. This suggests that moral disgust in situations of immorality elicits the same emotion as core disgust arising from diseases and bad tastes. These findings provide support for Rozin et al.'s (1999) proposal for the evolution of disgust from oral to moral.

One key idea about emotions that has been generally accepted by emotion researchers is its culture-specificity. Across different cultures, the number of emotions, as well as the types of emotions conceptualized and verbalized, varies drastically, despite the universal existence of human emotions across different cultures all over the world. For instance, an English native speaker may find it difficult to understand the fact that there are more than 100 terms for the concept of shame in modern Chinese. What is striking is that Chinese native speakers are able to use these shame words with remarkable precision in the appropriate contexts. The fact that people from different cultures categorize emotions by selecting the most precise of linguistic labels is simultaneously fascinating and challenging for the study of disgust, as well as other emotion concepts. Therefore, in the study of disgust, an important point to keep in mind is the variation across cultures in terms of how the term is experienced and conceptualized.

Disgust, like other emotions, despite being universally felt, is shaped and defined by cultural norms (Heider 1991). Rozin et al. (2008) argues that disgust is an emotion which has culturally evolved to produce a multitude of variations, and that disgust elicitors differ across cultures. This may be demonstrated by the types of food consumed in day-to-day life. An anecdotal example would be how it is culturally acceptable for Laotians and Thais, for instance, to eat certain insects like grasshoppers, worms, and termites as food, but

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people from other cultures may feel disgusted when they have to imagine these items as food. Another example stems from the Islamic world, where it is a religious norm to consume only halal food, which does not include pork. As a result, Muslims often view eating pork as a violation of moral and religious boundaries and therefore perceive it as disgusting.

To date, the bulk of psychological studies on disgust have been conducted in the Western world. This limits the body of knowledge about disgust to a purely Western perspective, which is problematic given the culture-specific nature of this emotion.

2.1 Psychological studies of disgust in Asia

Wu, Yang, and Chiu (2014) explored disgust of Hui Chinese Muslims, in particular their responses towards the defection of the Halal dietary norms mandated by their religion. The study found that Hui Muslims felt disgust upon seeing pictures of Muslims eating non-Halal food in an experimental condition. This, in turn, led to increased preference for the establishment of lifestyle practices and policies that would uphold these religious norms. The results of this study provide evidence to support Rozin's (1999) argument that disgust is the guardian of social order. Rozin argues that disgust is the emotion of socialization and civilization, and it functions to inculcate negative socialization in children. Alongside educating them on the prohibitions of their culture, the emotion of disgust is simultaneously instilled. In light of this, the Hui Muslims' disgust towards the defiance of their Islamic dietary norms is a negative emotion which functions to prevent them from violating these norms themselves, demonstrating the cultural adaptiveness of disgust as a protector and reinforcer of social norms. Another important finding from this study is that although participants felt disgusted at their fellow Muslims' consumption of non-Halal food, they felt no such disgust at non-Muslims' consumption of the same food. This demonstrates that there is a strong degree of cultural specificity when it comes to the experience of disgust, as only ingroup members' violation of norms elicits disgust.

In another food-related disgust study in Asia, Ammann et al. (2020) compare the effectiveness of the Food Disgust Picture Scale (FDPS) and another cross-cultural picture tool they newly developed. The FDPS is the first picture-based measure of disgust targeted towards food disgust elicitors, developed to complement the text-based Food Disgust Scale (FDS) first implemented by Hartmann and Siegrist (2018). In the FDPS questionnaire, participants are asked to rate their disgust level towards eight pictures, seven of which are food items (avocado, potato, melon, chocolate, chicken, tomatoes, and maize) and one which is food-related (a picture of a person's hands handling meat). Prior to this research, the FDPS was only tested in Switzerland. Hence, Ammann et al. set out to test if the scale was also applicable in other countries and selected China due to its cultural differences. Ammann et al. ran the same questionnaire in both Switzerland and China and hypothesized sex and culture as the two main predictors of food disgust sensitivity. Comparison of disgust measures across the two countries revealed similarities between the two countries in terms of sex, as females reported higher disgust scores than males for both countries. It was found that a few pictures, such as avocado, elicited higher disgust scores for Chinese

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participants than Swiss participants, whereas the opposite occurred for the chicken picture. Ammann et al. attribute this to differences in food culture, noting that different cultures have different degrees of familiarity regarding particular food products. For instance, avocadoes may be an unfamiliar food item in China, unlike in Switzerland where it is commonly eaten. Swiss food culture tends to favor processed meat products as opposed to fresh chicken meat, unlike the Chinese, who consume a higher percentage of fresh meat as opposed to processed meat products. Overall, Ammann et al. conclude that the FDPS is applicable to China, but also highlight that further research needs to be conducted on how disgust measures may be affected by cross-national differences in food culture arising from differences in food familiarity.

In another Asian study, Hurley et al. (2016) investigated the emotional expression and suppression of disgust in the context of Singapore. Existing literature has found that different cultures have different norms for emotional expression and suppression. For example, the collectivistic "Eastern" cultures (especially Asian countries) are generally less expressive than the individualistic "Western" cultures (e.g. Americans), and may have more cultural rules that mandate individuals' suppression of their emotions, especially those emotions that are perceived to be at odds with the interests of the group. Previous research suggests that Singaporean society is more collectivistic than individualistic, as expected of the Asian ethnic groups that make up Singapore's populace. The Singaporean society has a high degree of cultural diversity with a multiethnic population comprising primarily Chinese, Malays, and Indians. In this study, Hurley and colleagues set out to uncover if intra-cultural differences between participants with different ethnic backgrounds would lead to different degrees of emotional expressiveness. The study involved participants watching emotion-eliciting video clips, with one control group being asked to express their emotions freely and a suppression group being asked to suppress their emotions. Incidents of participants' disgust were identified via the recording and analysis of their facial expressions according to the Emotion Facial Action Coding System, in terms of frequency, duration, and apex intensity. The study shows that most participants could suppress their disgust when asked to, but Chinese participants produced even fewer expressions of disgust than their Malay and Indian counterparts, suggesting that ethnicity does indeed play a role in determining one's expressiveness. As Hurley et al. (2016) point out, the lesser expressiveness of Chinese participants is likely linked to the Confucian values deeply ingrained in Chinese culture, which suggests that different cultural values lead to different emotion display rules across cultures. Overall, the study not only affirms the argument that emotional suppression is a characteristic trait of Asian cultures like Singapore, but also highlights the importance of looking even more intricately into subgroups within a particular culture in order to elucidate any intracultural differences in emotion regulation.

In addition, Hurley's research team also uncovered differences between the emotional expression and suppression of negative emotions (e.g. disgust) versus positive emotions (e.g. happiness). The study found that although individuals who rated themselves higher on collectivism showed fewer expressions of disgust compared to participants who were less collectivistic, no such relationship was found regarding expressions of happiness. In their discussion, Hurley et al. attribute this finding to the fact that positive emotions like happiness are perceived to be constructive to the benefit of the group, and hence "individu-

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als may not see a need to suppress it" (Hurley et al. 2016: 59), unlike negative emotions like disgust which should be suppressed lest they cause destructive effects for the group due to their potential to offend others. These findings are important to the body of literature regarding disgust, especially in the Asian context, as they shed light on the relationship between collectivism, a trait commonly associated with Asian cultures, and the expression of negative versus positive emotions.

3 Linguistic studies of disgust

To date, most studies on disgust have been conducted in the field of psychology. However, we do not just use facial and other bodily expressions to express our emotions – we also express them verbally, and language is a useful window to understanding the way we construe our emotional worlds. Goddard makes a similar note, pointing out that "the study of emotional expression has overall been dominated by facial, rather than vocal, expression" (Goddard 2014: 1).

The few studies with a focus on expression discuss language and emotion within the Natural Semantic Metalanguage (NSM) framework. First conceptualized by Anna Wierzbicka in 1972, the NSM is a set of words expressing concepts that exist across every language, known as "semantic primes". Mainly, the NSM aims to be a metalanguage that is able to express or translate any concept that exists in this world, based on the idea that a finite set of universal semantic primes exists across all languages, and they can be used to describe culturally specific words and beliefs without imposing the values of another language or culture on the target language or cultural group (Sadow and Mullan 2020). Emotions, then, would constitute a clear example of culturally specific expression that would otherwise have been untranslatable cross-linguistically, if one were to attempt a translation using any other human language. This, of course, is based on the notion that no language is "culture-free" and that using Language A to translate emotional concepts of Language B is to invariably impose the cultural connotations of Language A to B. This may explain why the NSM is the most commonly used framework for most linguistic emotion studies. Goddard (2014), using the NSM framework, examined disgust interjections. He discusses the functions, meanings, and crosslinguistic variability of interjections, and how they are essential in the expression of disgust interjections in English (*Yuck!* and *Ugh!*) as well as Polish (*Fu!* and *Tfu!*). He found that across English and Polish, there is no perfect semantic match for disgust interjection and argues that there is significant variability in disgust interjections throughout the languages of the world. Between English and Polish, Goddard identifies a considerable number of crosslinguistic differences. For instance, English interjections are linked to the physical act of retching (for both *Yuck!* and *Ugh!*), whereas Polish interjections are linked more to spitting (for *Tfu!*) and blowing (for *Fu!*). Interestingly, this is linked to the interjections' place of articulation – *Yuck!* and *Ugh!* are pronounced at the back of the mouth, whereas *Fu!* and *Tfu!* are articulated with consonants pronounced at the front. Additionally, based on how retching is an involuntary act, unlike spitting and blowing which can be controlled, Goddard also suggests that Polish disgust interjections are associated with more "active" emotional responses compared to English (Goddard 2014:

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89). This suggests that Polish disgust is more related to a higher degree of conscious emotional involvement, especially for moral disgust elicitors, such as in expressing an intense and negative rejection of some deplorable action. This would present a contrast with English disgust, which may refer to a more instinctive disgust felt at core disgust elicitors. Overall, the results of his study further confirm the argument for the cultural specificity of emotions – while felt universally, different cultures have different experiences of the same emotions and hence express them differently to different effects.

3.1 Disgust in English

As the majority of research on disgust has been conducted in the Western context, the bulk of the knowledge regarding the linguistic expression of disgust is in English. Goddard (2014) identifies two main ways via which English speakers express disgust, namely interjections (e.g. *Yuck!* and *Ugh!*, as discussed above) as well as descriptive adjectives (e.g. *disgusting* and *disgusted*). These two types of linguistic features are distinguished by how descriptive adjectives are representational or symbolic (i.e. describing the emotion itself), whereas interjections are expressive (i.e. serving to express their immediate feeling of disgust without describing it).

Goddard's investigations on the Wordbanks online corpus found that both *Yuck!* and *Ugh!* have relations to body parts, but differ in the body part they are related to. *Ugh!* is linked to the nose and mostly used in response to foul smells, which is consistent with the "feel-like-retching" component of the word, since foul smells can induce retching. In contrast, *Yuck!* is linked to the mouth as it is mostly used in response to the prospect of oral incorporation of disgust objects (Goddard 2014: 88).

For descriptive adjectives, Goddard points out that *disgusted* and *disgusting* differ in the context of use. *Disgusting* describes the elicitor (i.e. the disgust object), whereas *disgusted* describes the agent who feels the disgust. Findings from the Wordbanks corpus show that *disgusting* is most frequently used to describe human actions and behaviors and conveys the impression that the object which is disgusting is somehow obvious or understandable. He further points out that *disgusting* gives the impression of the existence of a shared moral consensus and carries a judgmental overtone. On the other hand, *disgusted* mostly indicates an extreme response to an action which is perceived to be intensely negative.

Overall, the focus on English disgust terms shows that even seemingly similar words in one language can conjure an array of significant differences in terms of both meaning and usage. In other words, the term *disgust* in English is in itself polysemous. While we lack an extensive reference point for crosslinguistic studies of disgust, there is enough evidence to show that the construal and expression of disgust varies across languages and culture. Kollareth and Russell (2017) report that, in fact, there is no exact translation for English *disgust* in Hindi and Malayalam, languages from different language families in India. Similar lack of translational equivalence was also reported for Korean (Hans, Kollareth, and Russell 2016). In the next section, we will examine in detail how disgust is expressed in Mandarin Chinese.

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4 Disgust in Mandarin Chinese

With respect to the Chinese language, we found very few works regarding the Chinese emotion lexicon. While there exist a few studies on Chinese emotion (e.g. Ng et al. [2019] on the Chinese emotion lexicon, Li et al. [2004] on shame, Kornacki [2001] on anger, Ye [2001] on sadness), there is no description of disgust as an emotion in Chinese. In the following sections, we identify the words which can be used to express disgust in Mandarin Chinese via a questionnaire survey. Following that, we will examine the semantic elicitors and morphosyntactic properties of those disgust word tokens found in the corpus. We will focus on the conceptualization of the causes of disgust and make a syntactic and semantic comparison between Chinese disgust words and English disgust words, focusing on the crosslinguistic and cross-cultural differences of the disgust emotion.

Drawing on descriptors set out by Haidt et al. (1997), we identify that the most typical word expressing the emotion of disgust in Mandarin Chinese is *ě·xin* 恶心 (literally 'revolting heart'). The character 恶 has three pronunciations in modern Chinese: ě (low-rising tone), è (falling tone), and wù (falling tone). The character with the è pronunciation means fierce or evil, while the ě and wù pronunciation give rise to the disgust meaning by co-occurring with *xin* 'heart', as in *ě·xin* 恶心 and *yànwù* 厌恶. Li and Zhou (1999: 352) list the reconstructed sound of the character 恶 in Old Chinese and Middle Chinese as (**ak*) or (**aks*). According to LaPolla (personal communication, 2015), the reconstructed sound of the Chinese character 恶 is more revealing of the origin of disgust than the modern Chinese sound forms. The pronunciation associated with "disgust", ě, and the compound *ě·xin* with that meaning, did not appear until the Ming dynasty. LaPolla suggests that the *è* (**aks*) has many uses, and one of them is *disease*, and that may be the origin of its use in "disgust", unless it was actually an unrelated word that happened to be written with the same character. The possible articulations for this word are reminiscent of Darwin's observation that moderate disgust is usually expressed by guttural sounds like *ach* or *ugh*. Besides the word *ě·xin*, there are a number of other words in Mandarin Chinese which can also be used to express the emotion of disgust. We identified four main expressions (*ě·xin*; *fǎngǎn*; *yànwù*; *tǎoyàn*) to be strongly associated with disgust. In the following sections, we will describe the steps in which we extracted these disgust expressions by adopting a survey and corpus-based analysis.

4.1 Similarity task to evaluate Mandarin Chinese disgust emotion words

In this section, we will report a similarity task, through which we try to track the key words expressing the emotion of disgust in Mandarin Chinese. Thirty Mandarin Chinese native speakers participated in the study. The participants were first asked to freely list synonyms of the word *ě·xin*. We collected 16 words in total. To weed out semantically dissimilar exemplars, we then asked the participants to rate the semantic similarity between *ě·xin* and each of the 16 words using an 10-point scale, with 0 representing the least similar and 10 representing the most similar. The survey was conducted in Chinese.

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4.2 Disgust expressions in Mandarin Chinese

From the synonym free listing task, we collected 15 synonyms of *ě·xin*. Some are near-synonyms, such as *zuò'ǒu* and *yànwù*, while others have a more distant association with *ě·xin*, such as *xīukuì* and *fènnù*, which are typical terms for guilt and anger.

Tab. 55.2: Words generated from the free listing task.

Chinese script	恶心	厌弃	羞愧	作呕	愤怒	不耐烦	惊恐	不喜欢
Pinyin	*ě·xin*	*yànqì*	*xīukuì*	*zuò'ǒu*	*fènnù*	*bùnàifán*	*jīngkōng*	*bù xǐhuān*
Approximate translation	'disgust'	'detest and reject'	'guilt'	'grossed out'	'anger'	'impatient'	'astonish'	'dislike'

Chinese script	厌烦	嫌弃	反感	厌恶	失望	讨厌	烦闷	起鸡皮疙瘩
Pinyin	*yànfán*	*xiánqì*	*fǎngǎn*	*yànwù*	*shīwàng*	*tǎoyàn*	*fánmèn*	*qǐ jīpí gēda*
Approximate translation	'boredom'	'cold-shoulder'	'averse'	'disgust'	disappoint	'loathe'	'chagrin'	'goose bumps'

We did not consider the word frequency in the free listing task, since what concerned us was the semantic association between *ě·xin* and these words, rather than the frequency of these words in the free listing. We then submitted these words to a survey task, asking the participants to rate each of the words for its semantic similarity with *ě·xin*. From the results, *zuò'ǒu* is the word with the most similar meaning to *ě·xin*, while *jīngkōng* is the one with the least similar meaning to *ě·xin*. We designated the mean of 5 as the cut-off line and picked those words with the mean above 5 as the major disgust words in Mandarin Chinese. They are: (1) *zuò'ǒu*; (2) *yànwù*; (3) *fǎngǎn*; (4) *yànqì*; (5) *yànfán*; (6) *xiánqì*; and (7) *tǎoyàn*.

4.3 Disgust expressions in Mandarin Chinese

The purpose of this similarity task was to find out the major disgust words in Mandarin Chinese. Based on the definition of disgust given in Section 1, *ě·xin* is the most typical disgust word in Mandarin Chinese. Participants were asked to rate the similarity between *ě·xin* and other words. This method of localizing disgust words in the Chinese lexicon is useful in determining the prototypicality within the set of words. However, we later found that this method can be problematic for two reasons. Firstly, *ě·xin* sometimes does not refer to the emotion of disgust, but rather to the action of 'being nauseated', which may not necessarily result from the emotion, as will be elaborated in detail in Section 4.4.1. Secondly, there are different types of disgust. However, the word *ě·xin* is used predominantly to

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refer to core disgust. Therefore, using *ě·xin* as the most typical disgust word might obscure the other types of disgust observed in Chinese. These explanations will be elaborated in the following sections.

4.4 Semantic analysis of Chinese disgust words

The similarity rating task filters out seven words with close semantic association with the most prototypical disgust word *ě·xin*. The seven words are (1) *zuò'ǒu*; (2) *yànwù*; (3) *fǎngǎn*; (4) *yànqì*; (5) *yànfán*; (6) *tǎoyàn*; and (7) *xiánqì*. In order to understand how these words are used in discourse and to see what are the lexical semantic and morphosyntactic differences between these words, we searched each of the eight words in the online *Modern Chinese Corpus* (MNC) (http://www.cncorpus.org) developed by the Ministry of Education of China. The free online corpus contains 20 million Chinese characters in total. The number of tokens of each word is summarized in Table 55.3.

Tab. 55.3: The frequency of disgust words in the corpus.

		Mean	Token	Percentage
1	ě*·xin* (lit. 'nausea-heart'; 'disgust')	10.00	78	12.7 %
2	*zuò'ǒu* (lit. 'do-vomiting'; 'grossed out')	8.90	14	2.2 %
3	*yànwù* (lit. 'boredom-disgust'; 'disgust')	7.03	142	23.2 %
4	*fǎngǎn* (lit. 'averse-feeling'; 'averse')	6.73	94	15.3 %
5	*yànqì* (lit. 'bored-abandon'; 'detest and reject')	6.20	8	1.3 %
6	*yànfán* (lit. 'bored-annoyance'; 'boredom')	5.63	34	5.5 %
7	*xiánqì* (lit. 'dislike-abandon'; 'cold-shoulder')	5.16	28	4.6 %
8	*tǎoyàn* (lit. 'annoyance-suffocation'; 'chagrin')	5.00	215	35.1 %
	Total		613	100 %

From Table 55.3, we can see that the frequency of *zuò'ǒu*, *yànqì*, *yànfán*, and *xiánqì* is very low, with their percentages (specific word tokens/the total number of all tokens) lower than 6 %. Since their token numbers are very small, we chose to exclude them from the analysis.

This leaves the four most frequent disgust words (1) *ě·xin*; (2) *fǎngǎn*; (3) *yànwù*; and (4) *tǎoyàn*. In the following sections, we will delineate the semantic and morphosyntactic properties of each word by examining their occurrences in the corpus data to study the nuanced differences between the four words, and to see how the words are used to express the disgust emotion in Mandarin Chinese.

4.4.1 *ě·xin* (lit. 'nausea-heart'; 'disgust')

The word *ě·xin* is polysemous, with different meanings in different contexts. The first use of this word is to describe the physiological state of nausea, arising from causes such as illness, medicine, or pregnancy. In these contexts, the word *ě·xin* is not used as an emotion

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word. The second and most prominent use of *ě·xin* is its use as an emotion word for disgust, used to describe our negative attitude towards something offensive, which we would prefer to avoid. However, not every offensive thing will give rise to the emotion of disgust. Hence, it is necessary to work out antecedents that are considered to be offensive by Chinese speakers. In this section, we investigate the word *ě·xin* by looking at the phrases denoting elicitors to pinpoint the semantic/pragmatic property associated with the word at the conceptual level, and by looking at the morphosyntactic occurrence of the word to see how emotional causality is realized at the structural/discourse level.

We obtained 78 tokens from our free online corpus. Five of them do not have the meaning of disgust; rather, they mean 'evil intention' or 'cruel heart', with the first character pronounced with a distinct falling tone. As mentioned above in the beginning paragraph of Section 4, when 恶 is pronounced as è (falling tone), it means fierce or evil. Hence, we excluded these four tokens from our discussion. As indicated earlier, apart from being an emotion word referring to the emotion of disgust, the word *ě·xin* can also be used as a plain verb, referring to the physiological act of nausea. In other words, the Chinese word *ě·xin* is polysemous with two distinct English counterparts: *disgust* and *nausea*. Since we are concerned with the emotion use of the word, we will exclude the tokens carrying the meaning of nausea. Among the 73 tokens, 46 tokens (63 %) are used to describe the act of nausea, and 27 tokens (37 %) are used to refer to the emotion of disgust.

Tab. 55.4: Two meanings of the word *ě·xin*.

Meanings	Token #	Percentage
Nausea	46	63 %
Disgust	27	37 %

The causes of nausea expressed by the word *ě·xin* vary greatly, but none of them simultaneously contain the features of offensiveness and contamination. The causes range from illness, bad food, medicine, noise to pregnancy. In these instances, a possible English translation may be 'to throw up'. What is interesting about the Chinese word *ě·xin* is that there seems to be some overlap between the two meanings of nausea and disgust. As indicated by Darwin (1965), extreme disgust is expressed by the act of retching or vomiting. Nausea can be the expression of extreme disgust, but not necessarily involved in the emotion of disgust, since it can also be the result of many other elicitors not leading to any emotion, as illustrated by the examples in Table 55.5. Hence, it may be observed that in the naming of the emotion itself, Mandarin Chinese adopts the term describing the subjective feeling component of the emotion.

The other 27 tokens (38 %) of the word *ě·xin* directly refer to the emotion of disgust. The elicitors of these tokens are summarized in Table 55.6.

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Tab. 55.5: Causes of nausea expressed by the word *ě·xin*.

Causes	Examples	Token #
Illness	如消化系统被累及，可出现食欲减退、［恶心］呕吐、腹痛腹泻等症状。 *rú xiāohuàxìtǒng bèi lěijí, kě chūxiàn shíyù jiǎntuì*、 *[ěxīn] ǒutù*、 *fùtòng fùxiè děng zhèngzhuàng*. 'If the digestive system is affected, symptoms such as loss of appetite, [nausea] vomiting, abdominal pain, and diarrhea may occur.'	22 49 %
Bad food	秋天的扁豆中含有扁豆毒素，吃了会发生［恶心］、呕吐。 *qiūtiān de biǎndòu zhōng hányǒu biǎndòu dúsù, chī le huì fāshēng[ěxīn]*、 *ǒutù*. 'Lentils in autumn are toxic, so [nausea] and vomiting can occur if you eat them.'	7 15 %
Medicine	他曾因服药反应而头晕眼花，［恶心］呕吐。 *tā céng yīn fúyào fǎnyìng ér tóuyūnyǎnhuā, [ěxīn] ǒutù*. 'Previously, allergic reactions to medications caused him to experience dizziness, as well as vomiting due to [nausea].'	5 12 %
Chemical gas	空气里如果含有微量的硫化氢，就会使人感到头痛、头晕和［恶心］。 *kōngqì lǐ rúguǒ hányǒu wēiliàng de liúhuàqīng, jiù huì shǐ rén gǎndào tóutòng*、 *tóuyūn hé [ěxīn]*. 'If the air we breathe in contains even a small amount of hydrogen sulphide, headaches, dizziness and [nausea] will occur.'	3 6 %
Loud noises	更强的噪声，几分钟的时间就会使人头昏、［恶心］、呕吐，像晕船似的。 *gèng qiáng de zàoshēng, jǐ fēnzhōng de shíjiān jiù huì shǐ rén tóuhūn*、 *[ěxīn]*、 *ǒutù, xiàng yùnchuán shìde*. Within a few minutes, louder noises than this can cause one to experience dizziness, [nausea], vomiting, like seasickness.	3 6 %
Sea/ carsickness	晕船、［恶心］，折磨得他们不想吃饭。 *yùnchuán*、 *[ěxīn], zhémó dé tāmen bùxiǎng chīfàn*. 'Seasickness caused them to experience [nausea] to the point that they lost their appetite.'	2 4 %
Mental dissociation	一切都解离了，失控了，他感到目眩晕旋耳鸣和［恶心］。 *yíqiè dōu jiělí le, shīkòng le, tā gǎndào mù xuànyùn xuán ěrmíng hé [ěxīn]*. 'Dissociation and loss of control occurred, causing him to experience dizziness, tinnitus and [nausea].'	2 4 %
Pregnancy	怀孕早期，部分妇女有食欲不振、择食、［恶心］、呕吐，以及感觉疲乏无力等反应。 *huáiyùn zǎoqī, bùfen fùnǚ yǒu shíyùbùzhèn*、 *zéshí*、 *[ěxīn]*、 *ǒutù, yǐjí gǎnjué pífá wúlì děng fǎnyìng*. 'During pregnancy, some women experience symptoms such as loss of appetite, food aversions, [nausea], vomiting, and feeling tired and weak.'	1 2 %
Alcohol	这几口酒喝了不一会儿，我感到头痛、［恶心］，还呕吐起来。 *zhè jǐ kǒu jiǔ hē le bùyīhuìér, wǒ gǎndào tóutòng*、 *[ěxīn], hái ǒutù qǐlai*. 'Just a short while after taking a few sips of this wine, I experienced a headache, [nausea], and even vomited.'	1 2 %
Total		46

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Tab. 55.6: Elicitors for the disgust emotion expressed by the word *ě·xin*.

Emotion		Elicitor	Examples
Core disgust (4 tokens)	Eating	Eating	1. 这好比嚼饭喂给人吃，不仅失去味道，而且使人［恶心］［恶心］呕吐。 *zhè hǎobǐ jiáo fàn wèi gěi rén chī, bùjǐn shīqù wèidao, érqiě shǐ rén[ěxīn] ǒutù.* 'This is like chewing rice and feeding it to people, which not only makes it tasteless, but also makes people feel [nauseous] and sick.'
		Eating	2. 我们在山上搭起一个简易棚，常常是用水煮鱼，没有什么调料，开头几天还吃得下，渐渐一端起鱼汤就感到［恶心］［恶心］。 *wǒmen zài shānshàng dā qǐ yīgè jiǎnyìpéng, chángcháng shì yòng shuǐzhǔ yú, méiyǒushénme tiáoliào, kāitóu jǐtiān hái chīdéxià, jiànjiàn yīduān qǐ yútāng jiù gǎndào [ěxīn]* 。 'We set up a simple shed on the mountain, and often boiled the fish in water without any seasoning. The first few days we were still able to eat it, but gradually, we felt [disgusted] whenever the fish soup was served.'
	Odor	Odor	3. 戈切在我们面前站定了，他嘴里身上都冒着一股［恶心］［恶心］的臭骚味儿。 *gē qiē zài wǒmen miànqián zhàn dìng le, tā zuǐlǐ shēnshang dōu màozhe yì gǔ [ěxīn] de chòu sāo wèir*。 'Goche stood still in front of us, and there was a [disgusting] stench emanating from his mouth and body.'
		Odor	4. 他离她太近，他的嘴里冒出一股叫人［恶心］的死螺蛳气味。 *tā lí tā tài jìn, tā de zuǐlǐ mào chū yì gǔ jiào rén [ěxīn] de sǐ luósī qìwèi.* 'He was too close to her, and she could smell a [disgusting] stench akin to dead snails from his mouth.'
Animal-nature disgust (13 tokens)	Dead body	Dead animal corpses	5. 对了，那天护理员修锅炉，从里边掏出两只大死耗子，胀得那么大，你一想到平时喝的就是这里的水，［恶心］得直想吐！ *duìle, nàtiān hùlǐyuán xiū guōlú, cóng lǐbian tāochū liǎng zhǐ dà sǐ hàozi, zhàng dé nàme dà, nǐ yīxiǎng dào píngshí hē de jiùshì zhèlǐ de shuǐ, [ěxīn] [ěxīn] dé zhí xiǎng tǔ!* 'By the way, the nurse repaired the boiler that day and took out two big dead mice from the inside, and they swelled so big from the water they had absorbed! When you think that the water you usually drink had come from there, you feel so [disgusted] that you feel like throwing up!'
			6. 在赤潮后期，死鱼烂虾散发着令人［恶心］的腐臭，有的海区甚至成为鱼虾和贝类绝迹的"死海"，给海洋水产业带来严重的损失。 *zài chìcháo hòuqī, sǐ yú làn xiā sànfā zhe lìngrén [ěxīn] de fǔchòu, yǒude hǎiqū shènzhì chéngwéi yúxiā hé bèilèi*

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Tab. 55.6 (continued)

Emotion	Elicitor	Examples
		juéjì de" sīhǎi", gěi hǎiyáng shuǐchǎnyè dàilái yánzhòng de sǔnshī. 'In the later stages of the red tide, dead fish and rotten shrimp exuded a [disgusting] rancid smell. Some parts of the sea areas became the "Dead Sea" where fish, shrimp and shellfish went extinct, dealing serious blows to the marine aquaculture industry.'
		7. 有一条牛死在公路上，一下雨，天又热，一股腐烂的恶臭冲到人的鼻子里，使人［恶心］，大家掩着鼻子，赶快跑过了这条死牛。 *yǒu yì tiáo niú sǐ zài gōnglù shàng, yí xiàyǔ, tiān yòu rè, yì gǔ fǔlàn de èchòu chōng dào rén de bízi lǐ, shǐ rén [ěxīn], dàjiā yǎn zhe bízi, gǎnkuài pǎo guò le zhè tiáo sǐ niú.* 'A cow died on the highway. Due to the rain and hot weather, it caused a rotting stench to invade the nose of people nearby, making everyone [disgusted]. Everyone covered their noses and ran past the dead cow.'
Blood	Blood	8. 父亲又闻到了令人［恶心］的血腥味。 *fùqīn yòu wéndào le lìngrén [ěxīn] de xuèxīngwèi.* 'Once again, my father smelt the [disgusting] stench of blood.'
Hygiene	Feces	9. 高老憨见了儿子的猪篓，比见了当院的狗屎还［恶心］。 *gāo lǎohān jiàn le érzi de zhū lǒu, bǐ jiàn liǎodàng yuàn de gǒushǐ hái [ěxīn].* 'Gao Laohan saw his son's excrement, and found it even more [disgusting] than the dog feces in the courtyard.'
	Vomit	10. 不是船使我晕，是周围一阵阵［恶心］的呕吐。 *búshi chuán shǐ wǒ yūn, shì zhōuwéi yīzhènzhèn [ěxīn] de ǒutù.* 'It was not the ship that made me dizzy, but the [disgusting] vomit around me.'
	Dirty hands	11. 病人一走近他的身边，不管病手多脏，叫人［恶心］，他总是主动伸手抚摸，从接触中察病情。 *bìngrén yì zǒujìn tā de shēnbiān, bùguǎn bìng shǒu duō zāng, jiào rén [ěxīn], tā zǒngshì zhǔdòng shēnshǒu fǔmō, cóng jiēchù zhōng chá bìngqíng.* 'As soon as the patients approach him, no matter how dirty and [disgusting] their hands are, he always takes the initiative to touch their hands in order to observe their conditions using his sense of touch.'
Sex	Sex	12. 我想回敬她一个鬼脸，可我想到她和不知多少个男人上过床，胃里就一阵一阵［恶心］。 *wǒ xiǎng huíjìng tā yīgè guǐliǎn, kě wǒ xiǎngdào tā hé bùzhī duōshǎo gè nánrén shàng guò chuáng, wèi lǐ jiù yízhèn yízhèn [ěxīn].* 'I wanted to respond to her with a silly expression of my own, but once I thought about how many men she may

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Tab. 55.6 (continued)

Emotion		Elicitor	Examples
			have had sex with previously, I felt bouts of [nausea] in my stomach.'
		Sex	13. 丁万红猛想起给她磨镰刀的时候，那歪眉飞眼地佻挞神色，怪是［恶心］起来，忽把手叉住腰说：少废话！ *"dīng wànhóng měng xiǎngqǐ gěi tā mó liándāo deshí-hòu, nà wāi méi fēiyǎn de tiāo tà shénsè, guài shì [ěxīn] qǐlai, hū bǎshou chā zhù yāo shuō:" shǎo fèihuà!"* 'Ding Wanhong thought of the time he had sex with her. She had a frivolous expression with her crooked eyebrows, but strangely, she became [disgusting] and put her hands on her hips, saying "Stop talking nonsense!"'
		Sex	14. 他斜眼看着路口的性病医院的广告，心里觉得又［恶心］又怅惘。 *tā xiéyǎn kànzhe lùkǒu de xìngbìng yīyuàn de guǎnggào, xīnli juéde yòu [ěxīn] yòu chàngwǎng.* 'He squinted at the advertisement for the STD hospital at the intersection, feeling both [disgusted] and melancholic.'
	Ugliness	Ugliness	15. 后来隔了十年二十年只要我心里［恶心］只要我觉得世界丑恶的时候我就会想起我的两匹骏马。 *hòulái gé le shínián èrshí nián zhǐyào wǒ xīnli [ěxīn] zhǐ-yào wǒ juéde shìjiè chǒuè deshíhòu wǒ jiù huì xiǎngqǐ wǒde liǎng pī jùnmǎ.* 'It has been ten or twenty years, and whenever I feel [disgust] in my heart, and whenever I feel that the world is ugly, I will think of my two magnificent horses.'
		Ugliness	16. 那张流着涎水的丑陋讨嫌的疤拉脸，活像－只狰狞的怪兽浮现出来，令她［恶心］。 *nà zhāng liú zhe xiánshuǐ de chǒulòu tǎoxián de bā lā liǎn, huóxiàng– zhǐ zhēngníng de guàishòu fúxiàn chūlái, lìng tā [ěxīn].* 'That ugly scarred face from which drool dripped emerged like a hideous monster, making her feel [disgusted].'
		Ugliness	17. 因此，装饰要与自己的年龄、身材、肤色、性格等相协调，使人产生美感，否则，将破坏人体的自然美，甚至使人［恶心］反感。 *yīncǐ, zhuāngshì yào yǔ zìjǐ de niánlíng、 shēncái、 fūsè、 xìnggé děng xiàng xiétiáo, shǐ rén chǎnshēng měigǎn, fǒuzé, jiāng pòhuài réntǐ de zìránměi, shènzhì shǐ rén [ěxīn] fǎngǎn.* 'Therefore, one's dressing and makeup should be suitable for their age, figure, skin color, personality, etc., in order to give others the impression of beauty. Otherwise, the natural beauty of one's body will be ruined and induce disgust.'
Moral disgust (3 tokens)	Cheating	Cheating	18. 她参加过多种赛事，对主办人尤其是评委们的不正之风深恶痛绝，在谈到这一点时，她用了〞［恶心］〞的字眼儿。

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Tab. 55.6 (continued)

Emotion		Elicitor	Examples
			tā cānjiā guò duōzhǒng sàishì, duì zhǔbànrén yóuqíshì píngwěi men de búzhèngzhīfēng shēnwùtòngjué, zài tándào zhè yìdiǎn shí, tā yòng le" [ěxīn]" de zìyǎnér. 'She has participated in many competitions and hated the unlawful tendencies of the organizers, especially the judges. When talking about this, she used the word "[disgusting]".'
	Shame	Shame	19. 所以拉法格批评他：″乐于对令人［恶心］的无耻事物作多余的的描写″，″穿插一些本来用不着写得那么肮脏的场面″。 *suǒyǐ lāfǎgé pīpíng tā:" lèyú duì lìngrén [ěxīn] de wúchǐ shìwù zuò duōyú de de miáoxiě"," chuānchā yìxiē běnlái yòngbùzháo xiě dé nàme āngzāng de chǎngmiàn".* 'So Lafarge criticized him as: "willing to make redundant descriptions of shameful and [disgusting] things" and "adding in scenes that did not otherwise have to be described in such a filthy manner."'
Unknown elicitors (7 tokens)			20. 这多叫人［恶心］! *zhè duō jiào rén [è xīn]* 'This makes me disgusted' 21. 我觉得［恶心］，觉得愤怒。 *wǒ jué dé [è xīn] , jué dé fènnù* 'I feel disgusted and angry' 22. 一想起那些事儿她就［恶心］。 *yī xiǎng qǐ nà xiē shì ér tā jiù [è xīn]* 'when I think about what happened, I feel disgusted' 23. 她不住的［恶心］，晚上睡在床上心里直颤。 *tā bù zhù de [è xīn] wǎn shàng shuì zài chuáng shàng xīn lǐ zhí chàn* 'she can't stop feeling disgusted, her heart can't stop palpitating when she is in bed at night.' 24. 那家伙又不知去哪里［恶心］人。 *nà jiā huǒ yòu bù zhī qù nǎ lǐ [è xīn] rén* 'who knows where he has gone to be disgusting.' 25. 我一看见你就［恶心］。 *wǒ yī kàn jiàn nǐ jiù [è xīn*] 'I feel disgusted the moment I see you.' 26. 我看见他就［恶心］! *wǒ kàn jiàn tā jiù [è xīn]* 'I am disgusted by him'.

Haidt et al. (1997) offer a straightforward explanation about the connection between core disgust and nausea. Since core disgust is connected to safeguarding anything that enters the mouth, it is naturally associated with nausea and vomiting, as vomiting allows one to rectify the mistake of ingesting something bad. Animal-nature disgust is also called "animal-reminder" disgust, as the elicitors of animal-nature disgust may be seen as reminders

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to us that we are animals ourselves, and this emotion has been said to be a guardian of our human identity, functioning to strengthen the distinction between humans and animals (Haidt et al. 1997). Moral disgust refers to the disgust associated with some sociocultural behaviors such as brutality, political attitudes, hypocrisy, and violations of important social values. We see that the word *ě·xin* can be used to express all three kinds of disgust from the data summarized in Table 55.6. However, there is a semantic preference for *ě·xin* to refer more to core and moral disgust. So far, we have not found examples to illustrate interpersonal disgust.

4.4.2 *fǎngǎn* (lit. 'aversive-feeling'; 'antipathy')

In Mandarin Chinese, the word *fǎngǎn* is also used to express a strong repugnance towards somebody or something, especially for things that violate our human nature. Such violations may cause disgust, anger, boredom, intolerance, and so on. In this section, we will first investigate the word in question by looking at what exact emotions might be evoked by the word at the conceptual level, followed by an examination of the morphosyntactic behavior of the word to see how emotional causality is realized at the structural/discourse level.

We found 94 tokens from the *Modern Chinese Corpus*. However, two of them do not refer to disgust or any other emotion. Rather, they mean 'to feel the opposite' or 'to feel contrary'. These two tokens are excluded. We have altogether 92 tokens expressing a variety of emotions, and we were unable to identify the specific elicitor for 25 tokens. For the remaining 67 tokens, we classified their elicitors into the categories shown in Table 55.7.

Tab. 55.7: Different emotions expressed by the word *fǎngǎn*.

Emotion	Elicitor	Token #	Typical examples
Disgust (22 tokens)	Core disgust	1	这就会加深孩子对这种食品的［反感］。 *zhè jiù huì jiāshēn háizi duì zhèzhǒng shípǐn de [fǎngǎn].* 'This would exacerbate children's [distaste] towards these types of food products.'
	Animal-nature disgust	3	后座的男人长着一张四方大脸，两只老鼠眼里放出轻蔑的贼光，市民对他产生极大的［反感］。 *hòuzuò de nánrén zhǎngzhe yìzhāng sìfāng dà liǎn, liǎng zhǐ lǎoshǔ yǎnlǐ fàngchū qīngmiè de zéi guāng, shìmín duì tā chǎnshēng jídà de [fǎngǎn].* 'The man in the back seat had a big square face and his mouselike eyes exuded contempt. The citizens developed a sense of extreme [disgust] towards him.'
	Moral disgust	18	她对偷偷摸摸干这种营生总有［反感］，觉得丈夫的赚钱方式太丢人了。 *tā duì tōutōumōmō gān zhèzhǒng yíngsheng*

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Tab. 55.7 (continued)

Emotion	Elicitor	Token #	Typical examples
			zǒngyǒu [fǎngǎn], juéde zhàngfu de zhuànqián fāngshì tài diūrén le. 'She is always [disgusted] by these kinds of sneaky business, and feels that her husband's way of making money is too shameful.'
Anger (31 tokens)	Unreasonable superior attitude	6	胡书记对他这盛气凌人的态度有些［反感］。 *hú shūji duì tā zhè shèngqìlíngrén de tàidu yǒuxiē [fǎngǎn].* 'Secretary Hu was somewhat [disgusted] with his domineering attitude.'
	Disrespect of one's dignity	14	人总是有自尊心的，不尊重受教育者的人格，无端地加以训斥，就会遭到对方的鄙视和［反感］。 *rén zǒngshì yǒu zìzūnxīn de, bù zūnzhòng shòujiāoyùzhě de réngé, wúduān de jiāyǐ xùnchì, jiù huì zāodào duìfāng de bǐshì hé [fǎngǎn].* 'People always have their own pride, and if others were to disrespect the education they were brought up with and reprimand them for no reason, they will feel [disgusted].'
	Hurting words	11	陈妙常，也因为言语不慎，触犯了听话人的忌讳，引起了听话人的［反感］。 *chén miàocháng, yě yīnwèi yányǔ búshèn, chùfàn le tīnghuà rén de jìhuì, yǐnqǐ le tīnghuà rén de [fǎngǎn]* 'Chen Miaochang violated the rights of the listeners with his careless speech, arousing their [disgust].'
Intolerance (7 tokens)	Shallow writing skills or academic ideas	7	往往在那里闭门造车、信笔杜撰，违背了客观存在的生活逻辑，造成观众的［反感］。 *wǎngwǎng zài nàli bìménzàochē、 xìnbǐ dùzhuàn, wéibèi le kèguān cúnzài de shēnghuó luóji, zàochéng guānzhòng de [fǎngǎn].* 'Audiences are often [disgusted] by those who fail to give their words proper consideration and defy the natural logic of life and existence.'
Boredom (6 tokens)	Mundaneness of education	6	他们对于灌输教育，有一种本能的[反感]。 *tāmen duìyú guànshū jiàoyù, yǒu yìzhǒng běnnéng de [fǎngǎn].* 'They possess an innate [disgust] for the mundane ideas drilled into students by the education system.'
Disaffection (1 token)	Lack of opportunity	1	班干部没有发现他们的能力，没有提供让他们发挥的机会，而在班集体活动中，其他同学所表现的能力比不上这些没有得到表现的同学的

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Tab. 55.7 (continued)

Emotion	Elicitor	Token #	Typical examples
			能力，这样，这些同学就对班集体活动产生了［反感］。 *bāngānbù méiyǒu fāxiàn tāmende nénglì, méiyǒu tígōng ràng tāmen fāhuī de jīhuì, ér zài bānjítǐ huódòng zhōng, qítā tóngxué suǒ biǎoxiàn de nénglì bǐbúshàng zhèxiē méiyǒu dédào biǎoxiàn de tóngxué de nénglì, zhèyàng, zhèxiē tóngxué jiù duì bānjítǐ huódòng chǎnshēng le [fǎngǎn].* 'The class leader did not discover their abilities and failed to provide them with opportunities to excel. Yet, during group activities, students who were given chances to excel had poorer abilities than them. This caused these students to feel [loathing/dislike] towards these activities.'
	Unknown	25	

The examination of the elicitors shows that the word *fǎngǎn* is able to evoke a variety of different emotions. As is shown in Table 55.7, 31 tokens refer to the emotion of anger in the sense that one's right has been infringed by either one's unreasonable superior attitude, rude behavior, or hurting words. Twenty-two tokens refer to the emotion of disgust, and among them, one token is used for food-related disgust, three tokens refer to animal-nature disgust, and all the other tokens refer to moral disgust associated with cheating behaviors (five tokens), politics (eight tokens), and moral judgment of a person's intrinsic quality (five tokens). Seven tokens refer to students' boredom with the mundaneness of the education system. One token in our corpus data was used to describe jealousy. The frequency of each of the emotions expressed by the word *fǎngǎn* is summarized in Figure 55.1.

The use of *fǎngǎn* to denote such an array of negative emotions is in itself interesting. Are these emotions associated with each other in Chinese culture? If so, what is the universal semantic property that enables all these different emotions to be labeled under the same umbrella? We hypothesize that restraint and withdrawal are key components in the interpretation of *fǎngǎn*. For the emotion of boredom, the word *fǎngǎn* is mainly used to describe the students' repressed emotions towards their mundane and repetitive education system. Although the students do not like the teaching, they can challenge neither the teachers nor the educational system. All they can do is to withdraw their interest and attention from it. Similarly, for the emotion of intolerance, the word *fǎngǎn* is used to refer to readers' or audiences' negative feelings towards bad literary works or groundless academic ideas. Disaffection is not often expressed by the word *fǎngǎn* in Mandarin Chinese. However, the sole token of being unappreciated and overlooked exemplifies the sense of sullen disaffection, not just towards a person, but towards an entire event captured by the word *fǎngǎn*. As in the example of disaffection, the anger expressed by *fǎngǎn* is unique in that this kind of anger will not be externalized or expressed. It is more like a restrained anger in the sense that although the experiencer's right has been infringed, he will not fight

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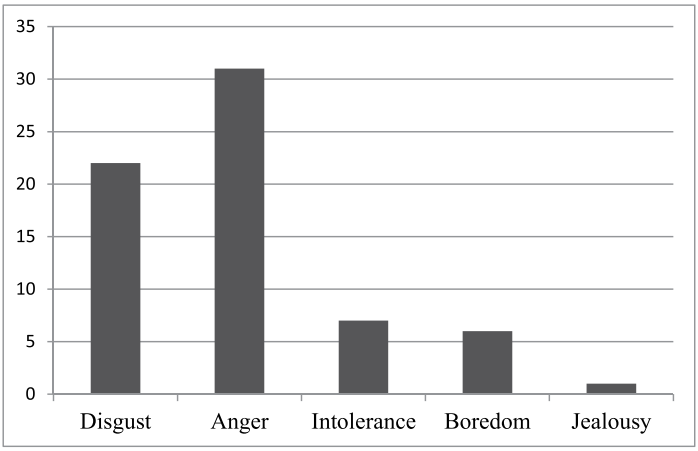

Fig. 55.1: Frequency of emotions expressed by the word *fǎngǎn*.

openly for his own right. Rather, he will either show his contempt or simply not show it. It is a kind of withdrawal of action. In this sense, the restrained anger is more or less the same as moral disgust.

Focusing on disgust alone, we can see that the word *fǎngǎn* mainly refers to moral disgust. This stands in sharp contrast to our discussion in Section 4.4.1 about the word *ě·xin*, which is mainly used to express core and animal-nature disgust.

Tab. 55.8: Percentage of disgust types expressed by the word *fǎngǎn*.

Disgust type	Core	Animal-nature	Moral
Token #	1	3	18

Although the word *fǎngǎn* can be used to express a large range of emotions, there is the common semantic element of withdrawal that links all these different emotions, and, interestingly, withdrawal is also the most typical action tendency for the emotion of disgust. What is central here is the controlled nature of the emotion as a type of negative withdrawal typically not shown or expressed.

4.4.3 *yànwù* (lit. 'boredom-disgust'; 'disgust')

The word *yànwù* is used to express a strong negative attitude towards somebody, something, or some event. The negative attitude expressed by the word *yànwù* can be disgust, boredom, intolerance, and so on. In this section, we will first investigate the word in question by looking at what exact emotions might be evoked by the word at the conceptual level, followed by an examination of the morphosyntactic behavior of the word to see how emotional causality is realized at the structural/discourse level.

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We have 142 tokens from our free online corpus. We classified their elicitors into the categories shown in Table 55.9.

Tab. 55.9: Different emotions expressed by the word *yànwù*.

Emotion	Elicitor	Token #	Typical examples
Disgust (49 tokens)	Core disgust	1	老师在讲台上打开瓶子，把色彩溶液倒了几滴在棉花上，并作出［厌恶］的样子离开了讲台，很快，很多学生声称嗅到了难闻的气味。 *lǎoshī zài jiǎngtái shàng dǎkāi píngzi, bǎ sècǎi róngyè dào le jǐ dī zài miánhua shàng, bìng zuòchū [yànwù] de yàngzi líkāi le jiǎngtái, hěnkuài, hěnduō xuésheng shēngchēng xiùdào le nánwén de qìwèi.* 'The teacher opened the bottle on the podium, poured a few drops of the colored solution on the cotton, and left the podium looking [disgusted]. A few moments later, many students started smelling an unpleasant stench.'
	Animal-nature disgust	6	陶南妮［厌恶］地看着那血，心里这样想。 *táo nán nī [yànwù] de kànzhe nà xuè, xīnli zhèyàng xiǎng.* 'Tao Nanni looked at the blood, feeling [disgust] in her heart.
	Moral disgust	42	生活之中的反面人物常常是假恶丑的反映，他们给人的只能是愤怒、憎恨和［厌恶］。 *shēnghuó zhīzhōng de fǎnmiànrénwù chángcháng shì jiǎèchǒu de fǎnyìng, tāmen gěi rén de zhǐnéng shì fènnù、 zēnghèn hé [yànwù].* 'The villains in everyday life are often reflections of fake evil and ugliness, and they are only able to make people feel anger, hatred and [disgust].'
Intolerance (8 tokens)	Shallow writing skills or academic ideas	8	每次谈起那个时期的诗歌，宋琳都露出［厌恶］的表情。 *měicì tánqǐ nàge shíqī de shīgē, sònglín dōu lùchū [yànwù] de biǎoqíng.* 'Song Lin showed an expression of [disgust] every time she talked about poetry from that period.'
Pacificism (2 tokens)	War	2	龙三一家，只有阿信一人明确表示反对战争、［厌恶］战争，但无能为力。 *lóng sān yìjiā, zhǐyǒu Āxìn yīrén míngquè biǎoshì fǎnduì zhànzhēng、 [yànwù] zhànzhēng, dàn wúnéngwéilì.* 'In the Longsan family, only Ashin clearly expressed her opposition and feelings of [disgust] towards war; yet it was not in her power to do anything about it.'
Boredom (12 tokens)	Hard work	11	在国外一些工业发达国家，利用音乐魂灵的引力是相当广泛的，现已被用来控制消费者的购买习惯、减轻工人的疲劳和对工作的［厌恶］情绪，从而提高工作效率。 *zài guówài yìxiē gōngyè fādáguójiā, lìyòng yīnyuè húnlíng de yǐnlì shì xiāngdāng guǎngfàn de, xiànyǐ bèi yòng-*

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Tab. 55.9 (continued)

Emotion	Elicitor	Token #	Typical examples
			lái kòngzhì xiāofèizhě de gòumǎi xíguàn、 jiǎnqīng gōngrén de píláo hé duì gōngzuò de [yànwù] qíngxù, cóngér tígāo gōngzuò xiàolǜ. 'In some industrially developed countries abroad, it is common to utilize the effects of music on the human spirit. This has been effective for controlling consumer buying habits, as well as improving the efficiency of workers by reducing feelings of [disgust] due to fatigue experienced in workplaces.'
	Interpersonal relationships	1	布克发现了水子，就更［厌恶］妻子了。 *bùkè fāxiàn le shuǐ zǐ, jiù gèng [yànwù] qīzi le.* 'Having discovered his wife's miscarriage, he started [hating] his wife even more.'
Hatred (2 tokens)	Jealousy	2	但是心里突然生起一阵［厌恶］的感觉，这是由妒忌而产生的心情。 *dànshì xīnli tūrán shēngqǐ yízhèn [yànwù] de gǎnjué, zhè shìyóu dùjì ér chǎnshēng de xīnqíng.* 'From my feelings of jealousy, a seed of [disgust] was suddenly planted in my heart.'
Unknown (69 tokens)	Unknown	69	

From Table 55.9, we can see that 49 tokens are associated with elicitors for the emotion of disgust. Eight tokens refer to intolerance of bad art works or groundless academic ideas. Two tokens refer to pacificism with the elicitor being war. Twelve tokens are associated with boredom with hard work or a personal relationship. Two tokens refer to the feeling of hatred born out of jealousy. In summary, for the word *yànwù*, apart from disgust, boredom and intolerance are two important emotions expressed by the word in question. The distribution of different emotions expressed by the word *yànwù* is summarized in Figure 55.2. *Yànwù* mainly refers to moral disgust, as shown in Table 55.10.

Tab. 55.10: Disgust types expressed by the word *yànwù*.

Disgust type	Core	Animal-nature	Moral
Token #	1	6	42

Similar to *fǎngǎn*, although *yànwù* can be used to express a set of different emotions, the common semantic element of "withdrawal" governs all these different emotions, and withdrawal is the most typical action tendency for the emotion of disgust. We suspect that this might be the reason why the word *yànwù* can be used express these different emotions.

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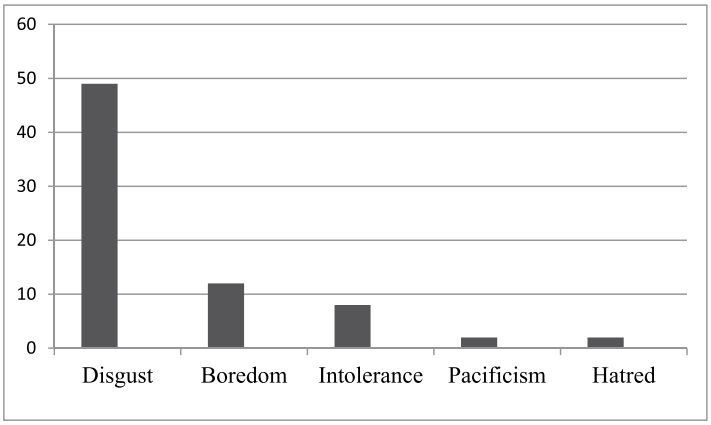

Fig. 55.2: Frequency of emotions expressed by the word *yànwù*.

4.4.4 *tǎoyàn* (lit. 'demand-boredom'; 'loathe')

Among the four words examined in this paper, *tǎoyàn* appears to be the most versatile word. The word *tǎoyàn* can express a large range of emotions, including disgust, anger, boredom, intolerance, and so on. The use of *tǎoyàn* in a flirtatious or coquettish context to mean a fake dislike is not included in this analysis. We obtained 216 tokens from the MCC. We cannot identify elicitors for 92 tokens. For the remaining 124 tokens, we identified and classified the elicitors into the following categories, as shown in Table 55.11.

Tab. 55.11: Different emotions expressed by the word *tǎoyàn*

Emotion	Elicitor	Token #	Typical examples
Disgust (72 tokens)	Core disgust	8	吸烟的人常常有一种令人难以忍受的口臭，只要不吸烟，口中的那股惹人［讨厌］的烟臭味，也就会消除。 *xīyān de rén cháng chángyǒu yìzhǒng lìngrén nányǐrěn-shòu de kǒuchòu, zhǐyào bù xīyān, kǒuzhōng de nà gǔ rěrén [tǎoyàn] de yān chòuwèi, yě jiù huì xiāochú.* 'Smokers often have unbearable bad breath. As long as they don't smoke, they should be able to eliminate the [disgusting] smell of smoke from their mouths.'
	Animal-nature disgust	36	"我可没有宠它们，" 妈妈连忙挥手赶走了阿黑，说，"这可是我们仓库管理委员会叫我代养的，我们仓库里的老鼠可［讨厌］哪！" *"wǒ kě méiyǒu chǒng tāmen," māma liánmáng huīshǒu gǎnzǒu le Ā hēi, shuō, "zhè kěshì wǒmen cāngkù guǎnlǐ-wěiyuánhuì jiào wǒ dài yǎng de, wǒmen cāngkù lǐ de lǎoshǔ kě [tǎoyàn] nǎ!"* '"I didn't raise them as pets," my mother waved away Ah Hei quickly, retorting, "Our warehouse management committee asked me to raise them, and the rats in our warehouse [despise] them!"'

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Tab. 55.11 (continued)

Emotion	Elicitor	Token #	Typical examples
	Moral disgust	28	研究表明，哈腰确是一种十分令人［讨厌］的下贱行为。 *yánjiū biǎomíng, hāyāo quèshì yìzhǒng shífēn lìngrén [tǎoyàn] de xiàjiàn xíngwéi.* 'Studies have shown that stooping is indeed an unpleasant behavior [despised] by many, giving the impression of inferiority.'
Anger (14 tokens)	Unreasonable superior attitude	2	我真［讨厌］那些红毛鬼，他们总是把中国人看做低一层的人类。 *wǒ zhēn [tǎoyàn] nàxiē hóng máo guǐ, tāmen zǒngshì bǎ zhōngguórén kànzuò dī yìcéng de rénlèi.* 'I really [despise] those red-haired ghosts (derogatory term for Caucasians), they always treat Chinese people as lower-class humans.'
	Rude behavior	7	对这大嚷大叫的人，别人虽然［讨厌］，但也不敢去禁止，你若让她小一点声讲话，她会骂了起来。 *duì zhè dà rǎng dàjiào de rén, biéren suīrán [tǎoyàn], dàn yě bùgǎn qù jìnzhǐ, nǐ ruò ràng tā xiǎoyī diǎn shēng jiǎnghuà, tā huì mà le qǐlai.* 'Although others may [hate] her for yelling and screaming like this, they dare not stop her, because if you ask her to speak quietly, she will scold you.'
	Hurting words	5	也许你［讨厌］我这些话，那么让你在深夜里，在孩子熟睡了以后静静地思索一下吧，究竟我说的话是对还是错误？ *yěxǔ nǐ [tǎoyàn] wǒ zhèxiē huà, nàme ràng nǐ zài shēnyè lǐ, zài háizi shúshuì le yǐhòu jìngjìng de sīsuǒ yíxià ba, jiūjìng wǒ shuō dehuà shì duì háishi cuòwù?* 'You may [despise] these words of mine, so I'll let you think quietly about whether what I said is right or wrong, after night falls and the children are asleep.'
Boredom (18 tokens)	Hard work	4	柳青最害怕的是“拨慢步”，最［讨厌］的是“整理内务”，十分头疼每周一次的内务检查。 *liǔqīng zuì hàipà de shì "bō mànbù", zuì [tǎoyàn] de shì "zhěnglǐ nèiwù", shífēn tóuténg měizhōuyícì de nèiwù jiǎnchá.* 'What Liu Qing fears most is to slow down, and what he [despises] most is to organize the house. Weekly housekeeping inspections always give him a headache.'
	Interpersonal relationships	1	听说，那石像作者是一位青年雕塑家……想不到在一座纪念苏东坡的石像上，亦缠绕着［讨厌］的人事纠纷，而我们的有关领导又不怎么尊重艺术家的劳动，这就不好说了。 *tīngshuō, nà shíxiàng zuòzhě shì yí wèi qīngnián diāosūjiā…… xiǎngbúdào zài yīzuò jìniàn sūdōngpō de shíxiàng shàng, yì chánrào zhe [tǎoyàn] de rénshì jiūfēn, ér wǒmende yǒuguān lǐngdǎo yòu bùzěnme zūnzhòng yìshùjiā de láodòng, zhè jiù bùhǎoshuō le.*

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Tab. 55.11 (continued)

Emotion	Elicitor	Token #	Typical examples
			'Rumor has it that the one who created the stone statue is a young sculptor... Unexpectedly, a stone statue commemorating Su Dongpo has become entangled with [disgusting] interpersonal conflicts, and the leaders involved also have little respect for the artist's hard work.'
	Repetitive noises	1	这时他听不到那［讨厌］的滴嗒声了，然而他马上感到手痛得火辣辣的，嗓子干得要冒烟，接着，他又听到了闹钟的声音。 *zhèshí tā tīngbúdào nà [tǎoyàn] de dī tà shēng le, ránér tā mǎshàng gǎndào shǒu tòng dé huǒlàlà de, sǎngzi gān děiyào màoyān, jiēzhe, tā yòu tīngdào le nàozhōng de shēngyīn.* 'He couldn't hear the [hateful] ticking noise at that moment, but immediately he felt a burning pain in his hands, and his throat was so dry like it was on fire. And then he heard the sound of the alarm clock again.'
	Verbosity	1	如此声明"只讲三分钟"的开头话，对于［讨厌］长篇大论的听众来说，当然是很受欢迎的。 *rúcǐ shēngmíng" zhǐ jiǎng sān fēnzhōng" de kāitóu huà, duìyú [tǎoyàn] chángpiāndàlùn de tīngzhòng láishuō, dāngrán shì hěn shòuhuānyíng de.* 'Opening the speech with the statement "just three minutes" is, of course, very welcome to the audience, who [despise] long speeches.'
	Attitudes towards life	3	你生活严肃，他装作正人君子的样子，说他怎么［讨厌］ 资产阶级的生活方式；你喜欢吃喝，他便陪你上馆子，逛市场，说："随便一点算什么，这是生活小节。" *nǐ shēnghuó yánsù, tā zhuāngzuò zhèngrénjūnzi de yàngzi, shuō tā zěnme [tǎoyàn] zīchǎnjiējí de shēnghuófāngshì; nǐ xǐhuan chīhē, tā biàn péi nǐ shàngguǎnzi, guàng shìchǎng, shuō:" suíbiàn yìdiǎn suàn shénme, zhèshì shēnghuó xiǎojié."* 'You live an austere life; he pretends to be a gentleman and claims to [despise] the bourgeois way of life. You like to eat and drink, and he accompanies you to restaurants and markets, saying: "Order and buy whatever you want, these are insignificant."'
	Age	2	喜新厌旧"也不能理解为只要新的就该被喜欢，旧的就该被［讨厌］。 *xǐxīnyànjiù" yě bùnéng lǐjiě wèi zhǐyào xīn de jiù gāi bèi xǐhuan, jiù de jiù gāi bèi [tǎoyàn].* 'It is not understandable why new things are often loved, and old things are often [despised].'
	Cumbersomeness	6	我们长途跋涉的人，最［讨厌］下雨了。 *wǒmen chángtúbáshè de rén, zuì [tǎoyàn] xiàyǔ le.* 'People like us who have to travel long distances [hate] the rain the most.'
Intolerance (11 tokens)	Lack of efficiency	6	我［讨厌］用一石米打一只麻雀儿的做法！ *wǒ [tǎoyàn] yòng yīshí mǐ dǎ yì zhǐ máquè ér de zuòfǎ!* 'I [hate] the practice of killing only one bird with one stone!'

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Tab. 55.11 (continued)

Emotion	Elicitor	Token #	Typical examples
	Shallow writing skills or academic ideas	4	小桃撇撇嘴，好象这个月来她也成了半个艺术家。他最［讨厌］那幅画啦，把虞姬画得象个大白馒头似的，一点儿力度也没有，纯粹媚俗！ *xiǎotáo piē piězuǐ, hǎoxiàng zhègèyuè lái tā yě chéngle bànge yìshùjiā. tā zuì [tǎoyàn] nàfú huà lā, bǎ yú jī huà dé xiàng gè dàbái mántou shìde, yìdiǎnr lìdù yě méiyǒu, chúncuì mèisú!* 'Xiao Tao curled her lips, as if she had also become half an artist this month. He [hates] that painting the most, he painted Yu Ji to look like a big white steamed bun with no strength at all, looking nothing but kitschy!'
	Non-conformity to gender norms	1	她认为男人就应该象个男人；她最［讨厌］男人身上的女人气。 *tā rènwéi nánrén jiù yīnggāi xiàng gè nánrén; tā zuì [tǎoyàn] nánrén shēnshang de nǚrénqì.* 'She thinks that men should be like men; what she [hates] most is when men exude femininity.'
Pacificism (3 tokens)	War	3	他们已经都认识了战争，深深的［讨厌］战争，那种战争并非为的他们大家。 *tāmen yǐjīng dōu rènshi le zhànzhēng, shēnshēn de [tǎoyàn] zhànzhēng, nàzhǒng zhànzhēng bìngfēi wèi de tāmen dàjiā.* 'They already understand war and [hate] it deeply; that kind of war does not benefit all of them.'
Preference (4 tokens)	Color	4	小松鼠摇摆蓬松的大尾巴，嘟起嘴不高兴：〞我［讨厌］绿大褂，我喜欢黄大褂。〞 *xiǎo sōngshǔ yáobǎi péngsōng de dàwěi bā, dū qǐ zuǐ bùgāoxìng: "wǒ [tǎoyàn] lǜ dàguà, wǒxǐhuān huáng dàguà."* 'The little squirrel wagged its big fluffy tail and pouted unhappily: "I [hate] that my coat is green, I would like a yellow coat."'
Shame (2 tokens)	Divorce	2	离婚，真的，你知道我非但是很［讨厌］而且是深恶痛绝的。 *líhūn, zhēnde, nǐ zhīdào wǒ fēidàn shì hěn [tǎoyàn] érqiě shì shēnwùtòngjué de.* 'Regarding divorce, really, you know that I not only [hate] it, but abhor it so much that it hurts.'
Unknown (92 tokens)	Unknown	92	

From Table 55.11, we can see that 72 tokens, which occupy the majority of all the tokens, are associated with elicitors of disgust, whereas 18 tokens are associated with elicitors of boredom, 14 tokens are associated with elicitors of anger, and 11 tokens are associated with elicitors of intolerance. The other nine tokens are associated with elicitors of war, color,

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Tab. 55.12: Disgust types expressed by the word *tǎoyàn*.

Disgust type	Core	Animal-nature	Moral
Token #	8	36	28

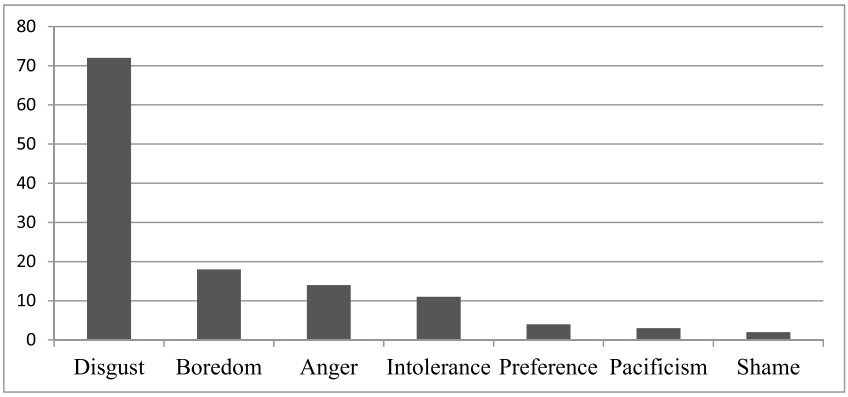

Fig. 55.3: Frequency of emotions expressed by the word *tǎoyàn*.

and divorce. In summary, the word *tǎoyàn* is mainly associated with elicitors for emotions such as disgust, boredom, anger, and intolerance. Again, the common semantic element governing all of them is the withdrawal or avoidance action tendency.

In terms of disgust, we see that the word *tǎoyàn* can refer to different kinds of disgust, and seems more compatible with animal-nature disgust, as is shown in Table 55.12.

The word *tǎoyàn* appears to be the most productive and versatile word among the four expressions studied in this chapter. Apart from animal-nature disgust, it is also used frequently to express moral disgust (see Figure 55.3).

4.4.5 General discussion

While it is commonly acknowledged that the study of emotions is highly interdisciplinary, we have not seen a great number of studies from the field of linguistics. What linguistics can offer is a perspective on the ways that emotions are conceptualized in various languages. Dirven (1997) demonstrates that one specific way of trying to understand the concepts of emotions in language is to investigate how the language community has conceptualized the causes and effects of emotions; he succeeded in showing that English conceptualizes emotional causality through the metaphorical use of prepositions. Our analysis in this study confirms Dirven's hypothesis that different languages have different devices for expressing causality. Our corpus data reveal that emotional causality with "disgust" is most frequently expressed directly by causative verbs in Mandarin Chinese, in sharp contrast to English, which makes extensive use of prepositions to express emotional causality (for example, *to tremble with fear*, *to be hot with hate*).

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Tab. 55.13: word * disgust cross-tabulation.

			Type of disgust			
			Core	**Animal**	**Moral**	**Total**
word	恶心 *ě·xin*	Count	4	13	3	20
		Expected count	1.7	7.1	11.2	20.0
		% within word	20.0 %	65.0 %	15.0 %	100.0 %
	反感 *fǎngǎn*	Count	1	3	18	22
		Expected count	1.9	7.8	12.3	22.0
		% within word	4.5 %	13.6 %	81.8 %	100.0 %
	厌恶 *yànwù*	Count	1	6	42	49
		Expected count	4.2	17.4	27.4	49.0
		% within word	2.0 %	12.2 %	85.7 %	100.0 %
	讨厌 *tǎoyàn*	Count	8	36	28	72
		Expected count	6.2	25.6	40.2	72.0
		% within word	11.1 %	50.0 %	38.9 %	100.0 %
Total		Count	14	58	91	163
		Expected count	14.0	58.0	91.0	163.0
		% within word	8.6 %	35.6 %	55.8 %	100.0 %

Besides differences in syntactic category, the four disgust words in Mandarin Chinese show different syntactic constructions. The use of the word *ě·xin* is restricted mostly to the causative construction. The most prominent morphosyntactic property of the word *fǎngǎn* either as a noun or as a verb is the transitivity alternation. Coupled with the analysis of the embedded complement clause of the causative verb and the movement of topicalization, we demonstrate the link and interaction between the transitive and the intransitive use of the word. The words *yànwù* and *tǎoyàn* are similar in that the emotion causality is predominantly represented by the intransitive verb use. The transitive verb use reveals little about the emotional causality associated with the verb. This is reminiscent of Goddard's (2014) observation, discussed in Section 3.1, that *disgusted* and *disgusting* are used in English to denote or highlight different aspects of disgust, in which one derivation focuses on the agent and another focuses on the elicitor. Mandarin Chinese instead lexicalizes this using different expressions.

The four Chinese disgust expressions map on to the semantic distinction in disgust in different ways. As shown in Table 55.13, there appears to be a significant correlation between the disgust words and disgust types in Mandarin Chinese (X^2 [6, N = 163] = 46.15, $p < 0.05$, Cramer's V = 0.376). Based on the disgust type with the highest word count and percentages for each disgust word, 恶心 *ě·xin* and 讨厌 *tǎoyàn* are most closely linked to animal disgust (65.0 % and 55.8 %, respectively), whereas 反感 *fǎngǎn* and 厌恶 *yànwù* are most closely linked to moral disgust (81.8 % and 85.7 %, respectively). This confirms that Mandarin Chinese utilizes different disgust terms according to the type of disgust experienced in each situation.

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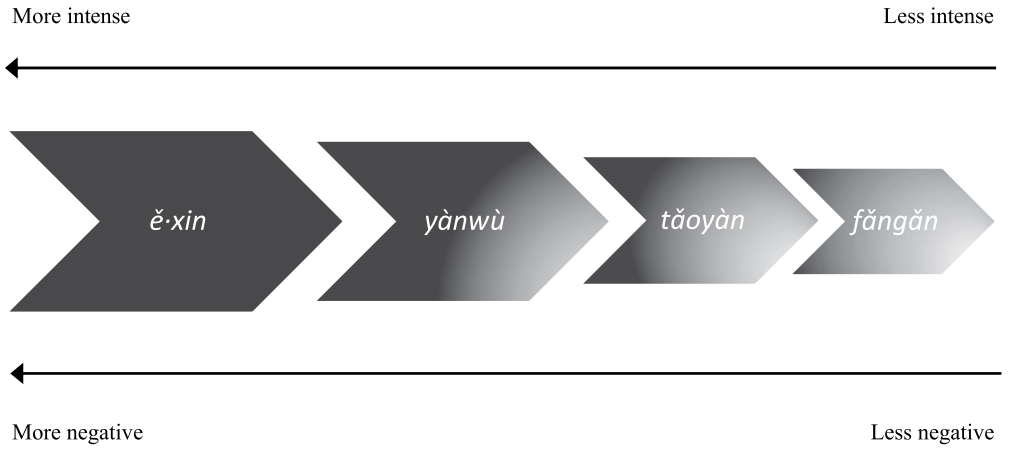

Fig. 55.4: Hierarchy of disgust emotions in Mandarin Chinese.

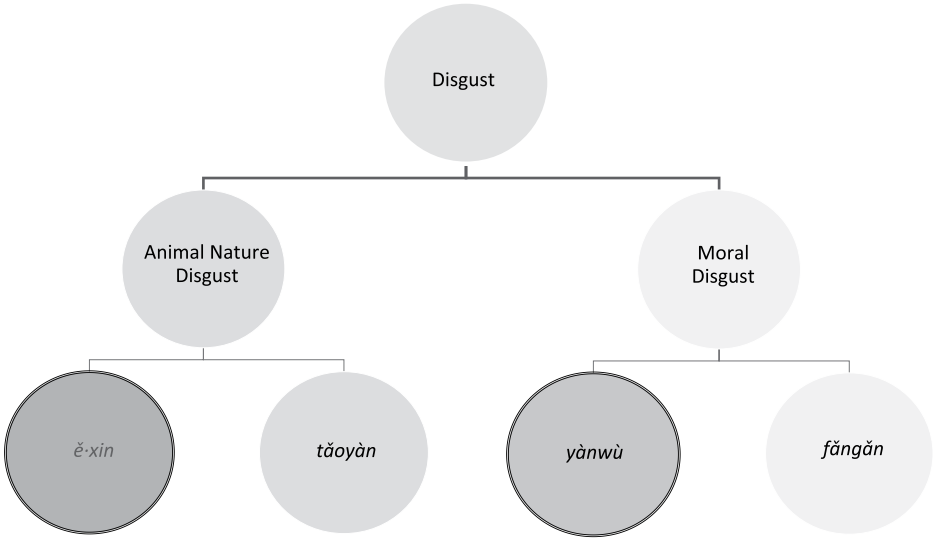

Fig. 55.5: Spectrum of disgust words in Mandarin Chinese.

Judging from Ng et al.'s (2021) MICE corpus data, it appears that *ě·xin* and *tǎoyàn* vary in valence and intensity, and the same can be said of *fǎngǎn*, *tǎoyàn*, and *yànwù*. Though this will have to be further investigated, *ě·xin* is both more intense and negative than *tǎoyàn*; for moral disgust, *yànwù* is more negative and intense than *tǎoyàn* and *fǎngǎn*; and *tǎoyàn*, in turn, is more intense and negative than *fǎngǎn*. Disgust is a strong emotion as it is, but speakers find ways to discriminate the strength of this emotion in terms of valence and intensity. Figure 55.4 shows the hierarchy for the four expressions of disgust in Chinese. There is a stronger, more intensely negative expression each for animal-nature disgust (*ě·xin*/*tǎoyàn)* and moral disgust (*yànwù*/*fǎngǎn)*, as shown in Figure 55.5.

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4.5 Comparison between Chinese and English disgust

In this section, we will highlight differences between the Chinese and English concepts of disgust, in terms of elicitors for the emotion of disgust and morphosyntactic realization of emotional causality. English disgust has been described in previous literature, especially by Goddard (2014). Emotional causality associated with the disgust words in English has also been documented; for example, in Dirven (1997) and Nabi (2002). (See Section 3.1 for a review of existing literature regarding the English concept of disgust and the corresponding English disgust words.)

Differences in disgust elicitors also exist across cultures. When asked about the things that disgust them, the responses of participants in the United States can be categorized into four different types of disgust: core disgust, animal-nature disgust, interpersonal disgust, and moral disgust (Haidt et al. 1997). Things that lead to core disgust include food, animals, and body products. Things that may lead to animal-nature disgust include deviance from the cultural ideal of sexuality, scenes of bloody car accidents (such as dead body, surgery, wounds, blood, and physical deformity), poor hygiene, and contact with death. It is animal-natured disgust because these things remind us of the fact that as humans, we are also animals. The reluctance to wear clothing that was previously worn by a healthy stranger may be contingent on the notion of having something as intimate as a clothing item from a stranger. This disgust is known as interpersonal disgust. The last type of disgust described in Haidt et al. (1997) is moral disgust, and it encompasses reactions to cultural and worldviews (e.g. racism, hypocrisy, political beliefs) and violations of social relationships. For Americans, moral disgust arises from the judgment of other people's character, especially of those who violate the basic dignity of other human beings. These four types of disgust relate to the contamination sensitivity schema proposed by Haidt et al. (1997), which suggests that human disgust expands from core to moral. This expansion is reflected in language, with some languages choosing to lexicalize the terms differently.

As for Chinese, our study found that the four Chinese disgust words examined in this paper can refer to core disgust, animal-nature disgust, and moral disgust. We did not find examples of interpersonal disgust in our corpus data. However, this does not mean that interpersonal disgust does not exist in Chinese culture; many Chinese, for example, are superstitious about wearing or buying second-hand clothes because they do not know who the previous owner is. The fear that a clothing item, house, or object may have previously belonged to a dead person is both interpersonal and intersects with contamination prohibition. Moreover, our data suggest that besides core disgust, animal-nature disgust, and moral disgust, Chinese disgust words, especially *fǎngǎn*, *yànwù*, and *tǎoyàn*, can also express other "withdrawal" emotions such as intolerance, boredom, controlled anger, and pacificism. For example, people who abandon their elderly parents may evoke disgust in the eyes of Americans, but the average Chinese will say, "This makes me angry, not disgusted". They think that this behavior is even more abhorrent than the word "disgusting" and that one should be angry at such cruel behavior. For them, 愤怒 'anger' appears to be a more intense emotion word than 恶心 'disgust'. However, in English, the opposite seems to be true. The more intense and successful regulation of disgust as an emotion in Chinese is one aspect that differs from studies of disgust in the West. This is also corroborated by

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Hurley et al.'s (2016) study showing that Chinese Singaporeans were more able to suppress disgust when told to do so compared to other ethnic groups in Singapore (see Section 2.1). As telling as these results may be regarding the cultural specificity of disgust, our comparison of Chinese and English can only provide a brief glimpse at the many differences that exist between cultures in the experience of disgust.

5 Conclusion

The examination of how the emotion of disgust is conceptualized and verbalized in Mandarin Chinese has led us to the following proposals:

1. In line with findings by Haidt et al. (1997) on American disgust, Chinese disgust terms can describe core disgust, animal-nature disgust, and moral disgust, which suggests that the contamination sensitivity schema proposed by Haidt et al. (1997) also applies to Chinese. However, the absence of interpersonal disgust is intriguing and how interpersonal disgust manifests itself in the Chinese culture can be examined in future research.
2. In Chinese culture, it appears that moral disgust is most often elicited when one's sense of self is threatened by others' dishonest behavior. This contrasts with the elicitor of moral disgust in American culture, which is when one's sense of self is threatened by the prospect of having no meaning to life, or the elicitor of moral disgust in Japanese culture, which is when one's sense of self is threatened by the inability to fit into society.
3. Emotion words in Mandarin Chinese involve many near-synonyms, as shown by the set of disgust words investigated in this study. The different near-synonyms may be differentiated by looking semantically at the types of disgust elicited in each situation. The results of our study suggest that *ě·xin* 恶心 and *tǎoyàn*讨厌 are most often used in situations of animal disgust, whereas *fǎngǎn* 反感 and *yànwù* 厌恶 are more closely linked to moral disgust. Overall, this tells us that the Chinese language uses different disgust terms for different types of disgust.

The mapping of the four Mandarin disgust expressions on core, animal-nature, and moral disgust is illustrated in Figure 55.6.

Figure 55.6 shows polysemy in disgust expressions. Unlike English, which tends to deploy different derivations for different aspects of disgust, Mandarin Chinese captures the same variation with different expressions. The polysemous aspects of these expressions to mean dislike, envy, intolerance, boredom, and so on is of course a challenge to those working in sentiment analysis. However, this analysis is the first step in sorting out the emotion of disgust from run-of-the-mill feelings of anger and dislike.

In conclusion, our study highlights the importance of detailed and nuanced linguistic analysis that takes into account the semantic range of the application of disgust words to arrive at an understanding of how disgust works in a specific language. While "disgust" is a loose term that covers the range of emotion expressions across languages, it is clear that they are used in specific ways that convey cultural significance not easily apparent even

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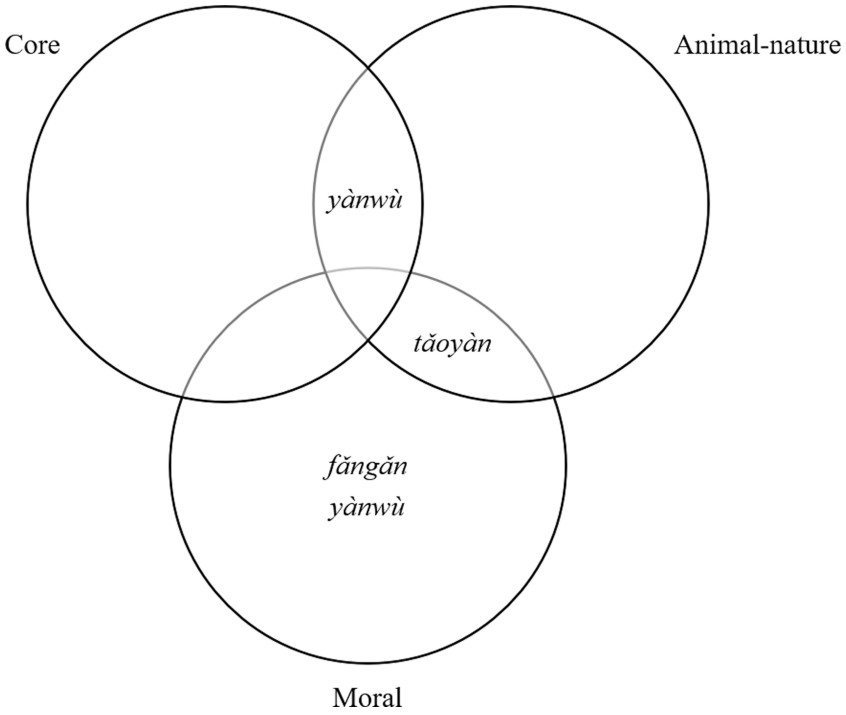

Fig. 55.6: Disgust in Mandarin Chinese

to proficient speakers of both languages. We argue that it is precisely such knowledge that is vital in ensuring clear communication in intercultural encounters.

In the larger picture, our study of Mandarin Chinese disgust has also elucidated a few ideas that may be applicable to the general study of disgust across languages. For one, it serves as a clear example of the cultural specificity of disgust – the crosslinguistic differences between disgust terms in different languages imply that every culture experiences disgust differently. Languages carve out the affective space in different ways. Kollareth and Russell (2017) point out that while lack of cleanliness is the antecedent for disgust in English, in Hindi and Malayalam, disgust is more commonly associated with immoral antecedents. As in the case of Japanese, Korean, Hindi, and Malayalam, there are no direct overlaps between English disgust and Chinese disgust (Russell and Sato 1995, Hans et al. 2015; Kollareth and Russell 2017).

The way disgust is lexicalized also varies across languages. We see this more clearly by comparing Chinese with the more frequently studied language of English. In Chinese, *ě·xin* and *tǎoyàn* are used for core disgust, whereas *fǎngǎn* and *yànwù* are used for moral disgust. This contrasts with English, which only has the word "disgust" to express both types of disgust; the variety of disgust words in Chinese also suggests that Chinese may perhaps be more nuanced and specific in the description of this emotion, compared to English.

Secondly, Chinese disgust words express not only disgust, but also other emotions (e.g. anger), as can be seen from the words expressing moral disgust. Similar to the observations

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made by Kollareth and Russell (2017) about Hindi, disgust terms in Chinese are highly polysemous. For example, *fǎngǎn, yànwù*, and *tǎoyàn* can express other emotions such as intolerance, boredom, controlled anger, and pacificism. This suggests that Chinese has lexicalized the combination of emotions (e.g. disgust combined with anger), which differs from English, where there is only the word "disgust" to express the same feelings. Previously, Nabi (2002) identified this problem by making a case for how the lay meaning of the word "disgust" is often misunderstood to mean anger rather than disgust. This problem appears to be avoided in Chinese disgust words, which also carry the meaning of anger alongside disgust. This may suggest that in situations involving a complex composite of emotions, languages with more nuanced disgust terms can help speakers express their exact emotions more precisely.

What the results of this study demonstrate is that unlike English disgust terms, Chinese disgust terms are highly polysemous – lacking a direct one-to-one mapping between the emotion of disgust itself, and the word used to express it. The lexicon data by Ng et al. (2021) confirms that *fǎngǎn*, *tǎoyàn*, and *yànwù* are commonly used words to describe disgust, on top of *ě·xin* as the core disgust term. In contrast, lexicon data on English disgust shows that the only English word used for expressing disgust is *disgusted*. Hence, the Chinese concept of disgust may not be as clear-cut as that of English, as the default experience of this emotion may not be disgust alone, but rather, disgust mixed with anger, boredom, and other relevant emotions. Disgust and other emotions may be universally felt, but they vary substantially across cultures in terms of their appraisals and expressions.

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Peter N. Stearns

56 History of basic emotions

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5 Conclusion: patterns of change
6 References

Abstract: The essay will begin with some examples of changes in emotions that link directly with linguistic study. It will then briefly introduce the field of the history of emotions itself, in terms of when it began to be identified and what its principal focus has become, making it clear that, in this relatively new field, definitive summaries would be premature. The emphasis on change over time stands out, and with it an obvious exploration of emotions as socially constructed. As with anthropology and its attention to comparative issues, historical research on emotional change depends heavily on analysis of alterations in word uses and meanings. The introductory section will also note some other kinds of historical approaches, less explicitly focused on change, notably Barbara Rosenwein's discussion of emotional communities.

The chapter will then turn to the exploration of change (and, where relevant, issues of word use) in three major categories: (i) changes relating to "basic" emotions, with illustrations drawn especially from fear and happiness; (ii) changes involving the "self-conscious" emotions, illustrated particularly by shame; (iii) changes in more composite emotions, with illustrations particularly from love and grief. Whatever the category, any discussion of change must include attention to consequences in actual emotional experience, along with the more readily identifiable emotional standards.

A final section will take up possibilities for wider historical synthesis, for example around ideas of "modernization" or, more recently, "informalization", that also hold out real promise for interaction between history and linguistic analysis.

1 Introduction

This article seeks briefly to present the field of history of emotion and its current directions, while highlighting connections with linguistic analysis. The fundamental historical claim is clear enough: emotions and emotional standards have experienced significant changes at various points in time – a claim in line with the larger constructivist approach, which sees emotions as contingent on cultural context. Analysis of emotional change has already

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benefited from attention to language, and arguably any linguistic work on emotion should take the possibility of change into account.

Before exploring the field in general, three examples of historical work closely related to language, two of them quite recent, will illustrate the types of change involved. Boredom offers a fascinating example of change, linked to the rise of growing expectations for consumer pleasures including more frequent entertainment from the later 18th century onward. The term itself was new in 18th century English, its precise origins unknown. There are certainly indications from earlier societies that people had been capable of finding things distastefully uninteresting, but the absence of a convenient single term does raise questions about the frequency or explicit experience of the emotion before modern times. It is hardly a coincidence that the new term, whose use began to solidify in the 19th century, came into play when signs of new interest in colorful clothing and new kinds of spectatorship were gaining ground. At the same time, the idea of boredom would itself experience an interesting evolution within its modern history. Initially, boredom was a sign of an unfortunate character trait: people should strive not to be boring. By the 20th century, however, as expectations of stimulation increased, the emphasis shifted to the undesirability not of being boring but of being bored. The term now mainly designated a situation that was undesirable and which someone else – for example, a parent or teacher – should take the lead in remedying (Spack 1995; Stearns 2003).

Nostalgia has received considerable historical attention and for good reason. The word (first introduced as a medical term in 1688) designated a powerful negative emotional experience from the late 17th to the early 19th centuries, particularly in military services. It was responsible for considerable disorientation (including desertions) and even outright illness or suicide. The negative aspects of nostalgia won continued attention in the 19th century, in reaction for example to rising rates of migration and immigration. Another term, homesickness, was also introduced in the 18th century to highlight this kind of emotional experience, though usually in milder forms. By the 20th century nostalgia and homesickness alike persisted, but also helped motivate new kinds of consumer efforts to buy goods that would touch base with a real or imagined past. The dire medical connotations in nostalgia fell away in the later 19th century, perhaps because more people became accustomed to moving around, perhaps because other terms were introduced to capture some of the symptoms. The history of nostalgia covers significant modern changes and dislocations but also intriguing adjustments in the emotional meanings involved (Dodman 2018; Matt 2011).

Recent historical work on loneliness, still under development, obviously takes into account the growing contemporary concern with the impact of social media or the rise of the elderly population segment. But Faye Alberti, the leading scholar involved, contends that a modern history of loneliness must extend back to the 18th century. While the word itself was not new at that point, only after 1750 did it begin to take on its current meaning, of unpleasant isolation from others. Previously, the adjective had been applied to the isolation of places – as in a lonely island – not a lack of contact with other people. Thus, Alberti notes that Robinson Crusoe, the earlier 18th-century literary figure, is not described as lonely in the modern sense, while loneliness would emerge strongly in more modern accounts of stranded travelers. Here is an intriguing challenge, both to figure out how the newer meanings of loneliness have played out over the past two centuries and to determine the explanations for the emotional innovations when they first occurred (Alberti 2018).

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The idea of venturing explicit research on the history of emotions first emerged in the 1930s and 1940s, as part of the great *Annales* movement in French social history. *Annales* historians were bent on expanding the range of human behaviors subjected to historical analysis, as part of developing a fuller understanding of the past and moving the history discipline beyond conventional topics such as high politics, wars, and diplomacy. While proposals for emotions history clearly fit the *Annales* agenda, actual projects did not result for some time (Burguière 2009).

Two ultimately compatible lines of inquiry began to open up by the 1980s. The first, again in France, emphasized the possibility of studying popular mentalities, as a means of gaining better insight into the ways people lived in the past (Muchembled 2003). Work on mentalities assumed an essentially anthropological definition of popular culture, focused on basic assumptions, beliefs and values. Not surprisingly, beliefs about emotions and their expression could figure strongly in this approach. Initial work, centered heavily on the 16th to 18th centuries (what historians call the early modern period), particularly explored fear and guilt as elements in popular religious experience; connections with the rise and fall of witchcraft persecutions might link to this emotion as well (Delumeau 1990). Work on mentalities also encouraged some discussions of emotions like anger and jealousy; Natalie Zemon Davis, for example, again working on early modern France, showed how, in popular testimony in court trials, men were allowed to use anger as an excuse for violence or insults, whereas women had to opt for the presumably more petty emotion of jealousy (Davis 1975). Finally, French mentalities research also encouraged a major statement about the changing nature of childhood, which though soon disputed opened the subject of changing beliefs and practices in the socialization of children (Ariès 1962).

The second source of explicit interest in the history of emotion emerged more clearly in the United States, as part of the growing attention to past experiences in family life, and ultimately in gender relationships as well. Thus, the generation of historians who were working on colonial New England families, including leaders like John Demos, dealt extensively with emotional topics as early as the 1970s (Demos 1970; Greven 1977). Other scholars raised questions about changes in family life that might only be answered through some attention to the emotional angle. Thus, demographic historians, seeking to explain the reduction in birth rates and the drop in infant mortality in the mid- to late 19th century, began to ask whether emotional issues must be involved, and not just changes in economic circumstances. Would parents, who were now confronted with a smaller number of children but who also were less likely to die, shift their emotional relationships with their offspring? Would some recalculation of emotional expectations help explain the demographic transformations in the first place (Vinovskis 1979)?

The rise of women's history, shortly after the surge in family research, helped focus attention on emotion as well. There was no escaping a need to contend with past stereotypes about gender-specific emotionality, in dealing for example with 19th century developments. Emotional expressions by men and boys might also provide opportunities for greater understanding, once women's historians began to show the contributions gender history might make in uncovering previously unfamiliar aspects of the past (Cott 1977; Rotundo 1993).

Fueled by some of the core implications of both family and gender history, explicit claims about the desirability of focusing on emotional patterns in the past began to emerge

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in the United States by the 1980s, ultimately coalescing, at least in part, with the initiatives established in France. The idea of expanding the range of historical inquiry toward a fuller understanding of the human experience, combined with an interest in exploring particular problems in the past – the nature of village superstitions; the process of change in certain family relationships or gender stereotypes – to spur attention to this new domain (Stearns and Stearns 1985).

From this initial context, the field of emotions history has witnessed a surprisingly robust expansion over the past quarter century. Major centers of inquiry have been established in Germany, Australia and Britain, resulting for example in a recently organized Society for the History of Emotion (Australia-based) with its own journal. Conferences abound, both in these centers and elsewhere. Extensions of emotions history into medical history (including of course changing definitions of illness and mental illness) and legal history (with attention to the emotional language of courtroom arguments) have fueled the growing interest. Several clusters of emotions historians have also been particularly interested in forging connections with work in the arts and philosophy, establishing interesting opportunities for interdisciplinary work in the humanities. Clearly, emotions history has expanded beyond its origins to tap a wide interest in cultural experience more generally, while also exploring linkages to other historical phenomena (Boddice 2018; Matt and Stearns 2014; Pampler 2015).

The growth of emotions history has frequently interacted with studies of language, with attention to changes in the meaning of key words, the disappearance of some classic terms, and the introduction of various neologisms – as the introductory case studies suggested. Historians are aware that moving beyond contemporary interpretations of language is vital to their task, and – without any sweeping theory attached – examination of shifts in emotional language plays a key role in characteristic attempts to assess emotional change (Goodard and Wierzbicka 1991; Wierzbicka 1999).

The surge of interest in emotions history complicates any generalizations about basic patterns in the field, simply because the outpouring of work is so varied. Nevertheless, while acknowledging the multiplicity of approaches now in play, a few common points can be identified.

First, and most importantly, emotions history is predicated on some belief that emotions in the past differ, at least in some crucial respects, from emotions in the present. This is why explicit historical work is essential, as part of the discipline's central mission in seeking to make the past intelligible. We cannot probe the emotional aspects of family life, or friendships, or crimes of passion, or fears of disease using modern definitions and assumptions alone. Earlier examples of changes in the meanings of nostalgia or loneliness make this point clear. This means as well that sensitivity to changes in the meanings of words and to revealing neologisms is a central preoccupation in doing emotions history well.

Second, many emotions historians are also keenly interested in change over time – another basic focus of the discipline overall. If, after all, past emotions differ in some respects from their current counterparts, change must have intervened at some point in time. And it is probable as well that revealing shifts in emotional experience deserve attention even before the origins of more recent patterns. A few prominent emotions historians, it

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must be noted, are uncomfortable with too much emphasis on change. Barbara Rosenwein, a medievalist, has urged attention to the variety of emotional communities in the past, rather than a focus on change (Rosenwein 2016). It remains true that most of those emotions historians who go beyond a particular point in the past, eagerly explore the process of change: seeking to characterize it, explain it, and trace its consequences.

Both aspects of emotions history – the assumption of past difference and the interest in the process of change – connect the field firmly to the constructivist approach in emotions research (Averill and Nunley 1988; Lutz 1988). Several emotions historians have in fact explicitly recognized this aspect of their relationship to the emotions field more generally, seeking to expand dialogues with other disciplines – sociology, anthropology and social psychology most notably, as well as linguistics – by explaining how key emotional meanings have been constructed over time.

What follows seeks to establish some of the main findings in emotions history in two principal ways. First, we look briefly at the history of several individual emotions, in several widely accepted categories. But then, more briefly, we suggest some wider generalizations about the patterns of change, particularly in the modern Western experience. Both approaches – on specific emotions and larger patterns – suggest important relationships to language use.

Before turning to the summaries, a final set of caveats is essential. The great variety of recent projects, particularly within the humanities, cannot be adequately represented. The field suffers as well from geographic limitations, though these are now beginning to be addressed: a disproportionate amount of work applies to Western Europe and North America, and particularly in the early modern and modern periods (16th to 18th centuries and then 18th century to the present). The history of emotions is still a field in the process of full definition.

It remains true that emotions historians have already offered some clear findings about several relevant categories, both for a number of discrete emotions and, more tentatively, for directions of change more generally. This is where the field contributes most explicitly to other types of emotions research (while benefiting from interdisciplinary approaches as well), including of course the field of language study.

It may help, in connecting historical work on emotion to other categories of emotions research, to use three conventional categories to help organize the first level summaries. Basic emotions refer to emotions that, psychologists often contend, generate recognizable facial expressions across cultures. Self-conscious emotions, like shame and guilt, highlight emotions that link individuals with social groups; and finally a number of emotions, such as love and grief, suggest more composite ingredients.

2 Basic emotions

Sometimes deliberately, sometimes as an outgrowth of other interests, emotions historians have tackled a number of basic emotions. This is despite the fact that, in principle (though amid some ongoing discussion about the whole category), basic emotions would seem to be particularly immune to change over time (Tarlow 2012). Only surprise, in the usual list

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of six basic emotions, has not really been addressed at all, and possibly this is an emotional experience so spontaneous and fleeting as to be immune to a historical approach. Otherwise, some effort has applied to all the emotions that are usually on the basics list, though with more attention to fear and happiness than to anger, disgust or sadness.

Work on fear arguably demonstrates the power of historical circumstance and susceptibility to causes of change – but amid a lingering recognition that in some form the emotion is always present for larger societies as well as individuals. The intriguing question – are some societies and time periods more fear-prone than others – has been addressed though not definitively answered.

The most sweeping claims about fear emerged from the French work on mentalities. Jean Delumeau (1990) claimed that, from the late Middle Ages through the 17th century, French people were assailed by evocations of fear by religious and political leaders alike. The sinfulness of humankind legitimately drew divine wrath, with fear used to instill guilt as a means of partial redress. The horrors of death and potential damnation were vigorously evoked both in popular religious art and in pervasive sermons, with ample representation of hellfire.

This cultural setting began to change, however, in the 18th century, which is where Delumeau argued that the nature and extent of fear began to alter fundamentally. Growing secularism, increasing creature comforts as a result of wider commercial prosperity, the specific Enlightenment attacks on traditional gloom and pessimism all served to introduce a different take on the emotion, including its role in childrearing. Gradual transformations in the definitions of childhood, away from original sin and toward a more neutral or even positive approach, played a key role here, when actual shifts in parental methods – notably, a decline in swaddling – combined with greater emphasis on maternal love. Delumeau speculated that in the very long run – looking to the later 19th century and onward – new fears, particularly directed toward the growing specter of degenerative diseases – might replace the "old regime", but his main contribution involved the attention to the relaxation of fear's traditional hold.

Delumeau's ambition has not been matched by other histories of fear. The idea of a significant transition in the use of fear in Western societies in particular settings such as childrearing, seems largely confirmed. But even as American parents were urged to downplay fear in the 19th century, a new kind of culture among boys emerged, full of scares and challenges, that among other things would yield a redefinition of the word *sissy* by the 1880s, transformed from an initial friendly reference to sisters to a designation of boys who could not overcome their cowardice (Rotundo 1993). It was only in the 1950s that the use of fear in Catholic education in the United States was finally modified, bringing American Catholicism more in line with mainstream Protestant recommendations that had, from the early 19th century onward, specifically urged against invocations of fear (including the classic use of bogeymen) in family discipline (Delumeau 1990; Kelly and Kelly 1998; Stearns 1994).

Another and more recent line of inquiry into the history of fear eschews the grand theme of modern Western change – though without refuting it – in favor of more limited inquiries into some of the unexpected ebbs and flows of the emotion, particularly in Britain and the United States, over the past two centuries. Thus Joanna Bourke, in a sweeping

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account, highlights specific points at which certain types of fear crested, often then later to recede. Thus in the 19th century a seemingly irrational fear of being buried alive gained serious social traction, leading among other things to modifications of coffins for several decades (Bourke 2006). Other work by historians and sociologists has focused on the rise of unrealistic fears of crime in the United States from the 1980s to the present, and particularly fears about the safety of children (Clay and Stearns 2018; Glassner 1999). Only recently and incompletely, with the rise of what is revealingly called "free range parenting", have some of these fears been challenged.

Happiness, the other basic emotion that has received particular attention, may offer a more straightforward historical picture, with some clearer basic changes that among other things involve several interesting neologisms. In Western society an emphasis on happiness, and positive expectations about progress in achieving a happy state, began to rise explicitly from the mid-18th century onward, as part of basic Enlightenment optimism. Earlier cultural emphasis on a certain degree of melancholy fell away; recommendations that people present a cheerful demeanor to the outside world became a fundamental feature of modern Western individualism, though with particular exuberance in the new United States (Kotchemidova 2005; McMahon 2007).

The process of installing a more systematic emphasis on happiness can be traced through the 19th century and beyond. Emphasis on the importance of cheerfulness in children gained ground steadily, which is not a traditional concern, and children's happiness was also institutionalized, with the rise of the birthday party – another 19th century innovation. A new word, *sulky* (introduced in the 18th century and applied initially to servants), enjoyed corresponding popularity as a means of designating children (and particularly adolescents, another newly defined category) who did not measure up to the new standards without however becoming impossibly recalcitrant (Stearns 2014). Other new terms – like *grumpy* and then, in the 1890s, *grouch* were introduced to designate individuals who were simply not measuring up to the new expectations of cheerfulness. Then in the 20th century, emphasis on the importance of happiness and cheerfulness in children and adults alike accelerated still further, with whole chapters and even books devoted to the subject of how to make a happy child or how to self-help one's way into this positive emotion.

The increasing importance of happiness showed in other materials as well. Happy marriages gained increasing attention (Coontz 2006). By the later 20th century, a growing literature began to apply as well to the notion of happiness at work – helping to promote the movement of positive psychology that officially emerged in 1998 (Horowitz 2017). And the results of the modern Western emphasis showed as well in international polls on happiness, particularly in contrast with East Asian societies that were comparably advanced in prosperity and wellbeing but simply did not respond to the same cultural cues (Stokes 2007). Finally, historians and others have worked on the extent to which modern happiness expectations lead to disappointments and frustrations, in various settings (MacMahon 2007).

Several other basic emotion categories – again, surprise has yet to find its historian – have not been treated as extensively as fear and happiness, but some suggestive results emerge.

Sadness has been explored mainly as a counterfoil to the rise of happiness, which means it deserves more attention going forward. The pervasive embrace of melancholy in

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the early modern period draws attention to the role of sadness and its service in the sight of God. Historians of happiness have legitimately wondered about the decline in the acceptability of sadness over the past century or so. The complexity of being sad in a happy culture has certainly been evoked in studies of the rise of formal diagnoses of psychological depression. The emotion also factors into the growing unpopularity of excessive grief, discussed below (Stearns 1988).

The modern history of disgust benefits from one seminal study. Alain Corbin demonstrates a fundamental shift in the nature of disgust in that same Enlightenment-infused period that redefined happiness. His study centers on France, but it almost certainly applies in broad outline to other Western (and possibly other) societies as well (Corbin 1986).

New ideas about disease – particularly the spread of the miasma theory of contagion, which though later displaced by the more accurate attention to germs was on the right track – and a growing emphasis on the desirability of better health combined to generate new targets for disgust around 1800. Things that had previously seemed perfectly acceptable now became the subject of literally visceral revulsion. Human excrement, urine (which only a century earlier had been used to brush teeth), sweat, cemeteries, garbage, stockyards – the new disgust list was extensive. Heavy scents, like musk, that had previously been used to mask certain odors, were now reproved. Spurred by new levels of disgust, the whole sensory category of smell was reevaluated and downgraded (Smith 2007). Respectable people combined efforts to move away from disgusting odors (including separating themselves more fully from the lower orders), with indulgence of light, flowery (and often French) perfumes, and soon with a revolution in personal bathing habits. And – though Corbin's generalizations have not been followed by a careful inquiry into more recent patterns of disgust – the overall modern pattern has surely largely continued. Here is another case, in other words, where a basic emotion seems to have been fundamentally redefined, with historical analysis central to the understanding of how the emotion has played out over time.

Anger, finally, though not as widely studied in the past as fear, probably suggests a similar complexity: some modern trends, at least in the West, must be combined with attention to some shorter-term oscillations for an emotion that is not only basic, but socially pervasive.

Hints of a distinctive modern approach do exist. The same kind of advice that urged against uses of fear in child discipline carried a similar message with regard to anger: loving parents must discipline their children without the added burden of rage (Shorter 1975). Growing emphasis on loving marriage and family life, from the 18th century onward, carried a similar message: adults should park their anger at the door of a happy home. Classic attention to the "first quarrel" in 19th-century marriage advice carried essentially the same message. There were also some early suggestions of a dismissive notion of anger as a childish emotion, suggested by the new word for anger fits, *tantrum*, that was introduced in the 18th century; the childishness idea cropped up again in social control efforts among 20th-century industrial psychologists (Stearns 1994).

A gendered theme entered strongly, primarily for the 19th century but with residues even today. While men needed anger, to motivate competitive work and to strive for social justice, respectable women should be anger-free. The emotion did not suit the gender that

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was now presumably destined to provide the basic emotional framework for family life. Scattered diary evidence suggests that many middle-class women were quite conscious of this standard, and eager to measure up.

In the 20th century the history of anger was further affected by the rise of industrial psychology and growing efforts to figure out management strategies that would reduce the emotion in the workplace and in labor protest. More recent programs, such as Total Quality Management and the current interest in workplace wellbeing, have carried similar messages about the importance of avoiding anger on the job; and sociological studies of service professions, such as sales work and flight attendance, have documented similar programs designed to make sure the anger does not surface even in interactions with irascible customers, sometimes distorting off-the-job emotional experiences as well (Benson 1986; Hochschild 2012) In childrearing manuals as well, substitution of the word aggression for anger by the mid-20th century suggested other concerns about the emotion. More recently still, the rise of angry populist voting in many Western countries raises further questions about the nature of anger in contemporary life.

3 Self-conscious emotions

Self-conscious emotions, notably pride, embarrassment, guilt and shame, form another common psychological grouping that also invites historical study, where social context and individual experience can be confined and where interesting patterns of language use may be involved. Shyness has also received historical attention as an emotion that becomes less viable given the interaction demands of modern economies (McDaniel 2003).

The shame/guilt relationship has won particular attention. Social psychologists draw important distinctions between shame and guilt – the first exposing the self to group scorn, the second focusing on reprehensible actions and, to some extent, more internal evaluation – but these are not always useful in historical analysis. In the first place, many languages, including classical Greek, do not have separate terms for the two emotions. It is worth noting that other languages, such as Lithuanian, lack distinctions between shame and embarrassment, which results in a rather harsh take on embarrassment (Konstan 2006; Tracy et al. 2007). And while the rise of Christianity created new emphasis on guilt, historical analysis suggests that shame in fact continued to predominate – as suggested by the emergence of the Anglo-Saxon word *shame* soon after widespread conversions (Burrus 2008).

The main historical point, until modern times, was the ubiquity of social reliance on shame as emotional discipline in agricultural societies for which there is any record. Parents (and teachers) used shame to bring children into line. Social groups relied on public shaming, including the famous stocks, to punish not only sexual offenses but bad business practices and professional fraud; governments added shaming to physical punishments of criminals. How this combined with, or was distinguished from, feelings of guilt is not always clear. Shaming actually accelerated in early modern Europe, as a means of imposing more rigorous manners but also through the introduction of village chivaris to highlight offenses such as widow remarriage (Elias 1982). It is vital to remember, with all this, that

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the most important goal of shaming was to prevent misbehavior in the first place – fear of shame was far more significant, and common, than actual shaming incidents. There were even words, like *shamefast* in English, to designate this kind of sensitivity to the possibility of shaming – words that have now essentially disappeared because of a greatly altered cultural context.

For in the 18th century, once again associated with the Enlightenment, social elites both in Western Europe and North America began to turn against shame, explicitly viewing it as an unacceptable affront to personal dignity – perhaps even more ignoble than the death penalty itself. By the early 19th century, a number of traditional shaming practices began to be revisited. Governments abolished the public stocks – the state of Massachusetts did so, for example, in 1804. Parents were urged not to shame their children, lest self-esteem be damaged. From this point onward, a variety of movements sought to curb shame, on grounds that it was needlessly harsh, even counterproductive (Nash and Kilday 2010; Stearns 2017).

This trend was truly important, and in some ways has continued into the early 21st century. Three complications must also be noted, however.

First, it proved hard to get rid of shame. A variety of social groups continued to depend on the emotion for discipline and as a means of identifying their own shared norms. Thus, shaming continued in the schools, though by the 20th century the most striking forms, such as the famous dunce cap, were finally eliminated. Sports coaches actively shamed their charges. More recently, shaming has been directed against obesity and other socially undesirable practices. In the United States, even courts of law have sometimes returned to active shaming, as preferable to jail sentences for certain offenses such as shoplifting or drunken driving. Shame is playing a vital role in the contemporary #MeToo movement, directed against unwelcome sexual advances.

Second, the movement against shame was distinctively Western. Other societies also curbed blatant practices such as the stocks (which however survived in parts of Latin America well into the 20th century). But gentler forms of shaming persisted strongly. The pattern is particularly marked in East Asia, where public opinion polls suggest a substantial approval of shaming as a means of disciplining children, in contrast to uniform disapproval (in principle) on the part of Western subjects. China has recently even introduced high-tech shaming for jaywalkers, using facial recognition software to post names and addresses of offenders. Historical assessment of the modern history of shaming must take major regional differences into account. It is also worth noting that the acceptability of shaming, again in places like East Asia, is also accompanied by clearer paths for social reintegration for past offenders than exist in the West, where the whole process of shaming is less acknowledged (Braithwaite 1989).

Finally, the modern history of guilt does not match the history of shaming as clearly as scholars first imagined – though the subject has not been adequately explored, even in its linguistic implications. Guilt as well as shame roused new kinds of resentment in the 20th century, leading among other things to the introduction (in American English) of the term *guilt trip* in the late 1960s (Clay and Stearns 2018). The initial assumption was that as shaming declined in the West, it was increasingly replaced by guilt (Demos 1989). This was the idea behind penal reforms that sought to use remedial imprisonment instead of public

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shaming; criminals would have a chance to ponder their guilt and emerge re-formed. And it was assumed that parents began to use guilt-based discipline to replace shaming as well. But at least superficial evidence shows that, in the United States, references to guilt declined at the same time and pace as those directed toward shame, from the mid-19th century until the 1960s. Then, from the 1960s onward, both shame and guilt gained growing usage, in a pattern that has continued to the present. Figuring out what these patterns mean is an obvious next step in this aspect of emotions history.

4 Composite emotions: love and grief

Historians have explored a variety of emotions beyond the basic and self-conscious categories, including some interesting work on jealousy and envy and a few efforts applied to joy (Matt 2003; Stearns 1989). But the two sentiments that have won the greatest interest in the composite category are love and grief.

Historians have paid particular attention to love – an obvious target for that emotions history that sprang from attention to past patterns of family life. While love was hardly a modern invention, there are strong indications that its valuation began to increase rapidly in the 18th century West – initially, particularly in courtship. Prior to this point, in Western Europe, most marriages had been arranged by parents, based primarily on economic criteria – property arrangements (including dowries for the brides) and capacities to work; the clear and understandable goal was to assure families of an appropriate material future. Courtships were fairly carefully controlled by the community to prevent disruptive emotional involvements. Love might follow from an arranged match of course, but this was not the main point.

By the 18th century, however, a number of regions in Western Europe began to suggest a greater importance for love as a factor in mate selection in the first place; several courts of law, for example, began to stop enforcing parental arrangements when one party (female or male) claimed that love would be impossible. A more romantic context was also encouraged by the rise of the novel as a new, and quickly popular, literary form, and by the availability of more attractive clothing, valued particularly by young people as part of their self-presentations in courtship (Campbell 1987; Stone 1977).

Parental affection also began to win greater comment, particularly around new emphasis on the loving qualities – and responsibilities – of mothers. Young children, previously seen as somewhat animal-like and tainted by original sin, began to be reimagined as charming and lovable (Badinter 2011).

This was just the start of an emotional transition, and again it played against a backdrop in which family affections had by no means been entirely absent previously. The causes of change are not entirely clear. One approach suggests that, as the Western economy became more commercial and competitive, older relationships were reevaluated and the family gained new importance as an affectionate alternative to the world of business and industry – what one historian, focusing on the 19th century, would call a "haven in a heartless world" (Leites 1986; Lasch 1991). Growing individualism created tensions with

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older standards, and particularly with parentally arranged marriages, while other cultural shifts, like the rise of the novel, illustrated but also helped further the new values.

By the 19th century, certainly, the idea of an intense courtship, in which romance could blossom as the basis for engagement and marriage, gained further support. In the growing but relatively anonymous cities, newcomers began advertising in newspapers for potential mates, emphasizing the hope for love over all other criteria – a suggestion of the same kinds of values that, today, Internet match makers offer (Epstein 2014; Lystra 1989).

The transition in the emotional calculus of children was at least as marked. Childrearing manuals, admittedly directed primarily at a middle-class audience, highlighted the importance of a loving mother, and increasingly suggested that children, properly raised, would actively contribute to an affectionate family as well. This recalculation intertwined with the rapidly declining birth rate, as families discovered that the rising costs of educating children properly required new restraint; in turn, parents with fewer children might more easily expand their emotional investment in the individual child. When, by the end of the 19th century, infant mortality rates began to plummet as well, reducing the chances the families would face a child death, the investment was further facilitated.

It is important not to exaggerate the change. Economic factors still played an important role in mate selection; love seldom reached across social class boundaries. Emotional expectations could backfire, in situations where families were becoming less essential as units of production. Many spouses found themselves disappointed in their quest for love, and this could play a measurable role in rising divorce rates. The parent-child relationship might also misfire. Most generally, the introduction of a new concept of adolescence, though caused by several developments, helped explain a period in which parental expectations of affection might be thwarted at least for several years (Kett 1977). While it remains largely true that family ideals were shifting toward greater emphasis on hopes for love, actual experience was both varied and complex.

The growing approval of familial love raises additional questions. The initial conversion took shape in the West, so would similar developments occur in other parts of the world amid economic change and urbanization, and under some influence from Western popular culture? The answer, to date, seems mixed: several societies undergoing rapid change seem to value retention of arranged marriage in principle, but in fact, changes in courtship patterns often reduce the parental role and suggest a higher valuation of mutual attraction and affection. Patterns in the West itself have shifted away from the flowery affection touted in 19th century middle-class culture. As dating replaced more formal courtship, consumer values and more open sexuality at the least somewhat shifted the definition of love, creating additional complexities in the emotional realities of family life (Bailey 1988; Chen 2016). On the other hand, important modern continuities stand out as well: the term *soul mate*, first introduced in 1832 in the United States, figures heavily in contemporary advertisements for computer-based matchmaking.

Not surprisingly, evolution of grief standards in the past two centuries bear some relationship to the growing interest in love, but connections to the changing experience of death adds further complexity. The growing emphasis on familial love almost inevitably heightened expectations of grief when a spouse, child or (less certainly) parent died. This is not to claim that premodern families had not experienced grief, sometimes profoundly.

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But the increase in elaborate mourning in the 19th century – often including more elaborate funeral monuments, even for children – suggested that at the least intense grief was increasingly approved and expected. A growing belief that certain kinds of death – again, particularly for children – should be preventable may have added a further component of guilt, intensifying grief from yet another direction (Lewis 1992; Rosenblatt 1983; Stearns 2007).

But the more dramatic changes in the actual death rate, experienced in Western society between 1880 and 1920, ushered in a further redefinition of grief standards. Now, excessive grief was seen as a burden to others and an indication of personal distress that might require therapeutic intervention (the kind of psychological assistance now called "grief work"). Elaborate signs of mourning steadily declined. Considerable emotional emphasis shifted toward combatting death in the first place – urging increasingly elaborate and often dubious medical efforts to stave death off at any cost, even against the express wishes of the individual involved for a more dignified passing. Arguably, love and guilt still intertwined, measurably affecting reactions to death, but with dramatically new expressions and consequences now applying with particular intensity to older relatives (Stearns 2007).

Summary of historical work on major emotions, whether in the basic, self-conscious, or composite category, suggests the range in existing inquiry and the obvious ability to describe, explain and assess a number of significant changes. Beyond illustrating this fundamental interest in emotions history, the same summary demonstrates existing connections to linguistic analysis and opportunities for further inquiry. Other emotions deserve attention. Earlier time periods are beginning to win greater interest, as suggested already in the discussions of shame and guilt. The need to expand geographical coverage is fundamental. The potential for further discovery, and more fruitful interdisciplinary collaboration, is great.

5 Conclusion: patterns of change

Historical research on specific emotions, and its relationship to other interests such as linguistics, illustrates the many aspects of the history of emotions more generally, beginning with the interest in change. Shifting emphases around particular emotions help explain many other developments, including changes in law – the rise of "no fault" divorces as a means of reducing guilt and anger – or new kinds of funeral ritual. New emotional formulations even help explain major revolutions, such as the French or American (Eustace 2008; Reddy 2001). And the evolution of particular emotions links directly to emotional patterns today, including some revealing confusions about the uses of shame or the intriguing debate about the adequacy of contemporary grief.

But individual emotions are not of course the whole story. Historians are also interested in building larger patterns, and here too there are implications for fields such as linguistics. The basic question is deceptively simple: are there points in time when a coincidence of several developments generates particularly sweeping changes, that cut across a number of specific emotions? And while work here remains tentative, in what is after all still a new field, there are some interesting possibilities (Boddice 2019).

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It is pretty clear that the combination of Enlightenment ideas and their popularization in the later 18th century, plus growing commercialism and urbanization, plus the beginnings in the decline of the birth rate, encouraged a range of shifts in emotional standards and experience. Grief, disgust, love, shame, possibly fear began to change rapidly, often linked to new ideas about the physical senses and about gender or childhood. Many key neologisms resulted, as suggested above, from *tantrum* to *grumpy* to *boring* and beyond, while some older terms like *shamefast* dropped away. And opportunities for comparison with comparable if more recent transitions in other societies, such as Japan, invite consideration as well.

But a second modern transition deserves attention as well, where linguistics has already helped carve out a category: the first part of the 20th century. Certainly, by the 1920s, a number of 19th century staples were subjected to reconsideration: grief, for example, or male anger, or excessively flowery expressions of love. A group of Dutch historical sociologists have labeled this overall pattern of change "informalization", which corresponded also to more informal modes of address (more smiling, more use of first names), clothing, manners, and the like (Wouters 2007). The directions of change clearly overlap with the exploration of informalization in linguistics, which moves along similar lines though with fuller development. In the history of 20th-century emotions, informalization has also involved an attempt to reduce emotional intensities and emphasize smooth interpersonal relations even at the expense of greater superficiality (Shields and Koster 1989; Stearns 1994).

Further work, and additional interdisciplinary collaboration, can explore these larger patterns of change and also seek to identify others. And historians and others certainly must be sensitive to the obvious further challenge: of trying to figure out when and how yet another cluster of changes emerges in our own societies, whether in response to the allure of social media or the growing political interest in promoting fear or some other combination of factors.

Opportunities for further work on emotions history are obvious, for many periods in the past and also for additional linkages to contemporary patterns and problems. The comparative challenge is crucial in expanding beyond a largely Western framework. Interactions between the evolution of emotion and changes in language can be more fully explored. The expansion of emotions history has created important audiences within the discipline, eager to gain new insights about particular moments in the past. But emotions history ultimately makes sense as part of a wider inquiry into what emotional experience is all about and how attention to change can expand our grasp of the phenomenon. Here, mutual collaborations with other approaches to emotion and emotional language remain fundamentally important.

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XII Research into multilingualism, intercultural communication, and translation

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Hidefumi Hitokoto and Keiko Ishii

57 Comparative and contrastive emotion studies

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Abstract: Viewing humans as cultural agents, we argue that language provides a framework to perceive and experience emotions in a culturally prescribed manner, and thus is part and parcel of the cultural self. We first define our perspective on culture and the self and review comparative and contrastive cultural studies on emotional processes, specifically, cross-cultural studies of happiness, social emotion, emotion regulation and culture-individual fit. We then turn to studies of bilinguals' self-perception, thinking style, attention, self-esteem, and neural feedback processing involving automatic and/or affective processing to elucidate the inseparability of language and self-processing that is at the core of affective response. We discuss the ways in which culturally shared meanings can shape how we process and experience emotions, and how these meanings are implicated in language and knowledge structures attributable to cultural learning.

1 Introduction

We develop our argument mainly from a cultural psychological perspective that our *self* is a culturally learned and integrated system encompassing cognition and affect, and language is a culturally produced medium for sharing meaning and propagating representations of the world across participants in the same semiotic space. These functions of lan-

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guage are typically implicated in how we use it to carve up the physical world and construe our emotional experience. We selectively review studies in sync with our proposition, starting with our view on culture and the self, and the effect of language on basic perception. We then present a series of comparative and contrastive cultural studies on the link between language and emotions. Finally, we present bilingual studies using various measures of the self and emotional processes.

2 Comparative and contrastive approaches to emotion

In this chapter, we review studies from both comparative culture and contrastive culture/language studies. We see the two approaches as neither in opposition to nor parallel to each other, but as positively correlated, and we use them in tandem to examine diversity and to confirm the underlying dimension of culture.

We view the study of cultural contrasts as an approach to discovering different modes of psychological functioning by focusing on a specific aspect of psychological processes (language) that has distinct features or functions across two or more groups. Such an approach is valuable when believed-to-be unitary psychological phenomena in fact have variations. Finding shame to be a moral emotion governing action for a primary audience, in this case, Americans during World War II, who believed guilt to be the supreme moral code (Benedict 1946), was valuable for re-considering the nature of morality at a higher level: guilt and shame can both be moral depending on the context. This approach was most famous in the anthropological studies of emotion during the early 20th century. The *raison d'être* of this approach is the caution it can offer to easy generalization, which is ever needed in empirical psychology which produces generalizable theories with limited samples (Henrich, Heine, and Norenzayan 2010).

We view comparative cultural study as an approach comparing more than two groups that are systematically divergent regarding shared meanings of certain ideas or actions, such as the self, values, or emotions, and that are deduced from a theory about underlying diversity. Shared meanings within a culture and the underlying cultural dimension itself may or may not be accessible to the individual members of a culture, because, as we introduce below, some critically important meanings can only be implicated by the subtlest of human behavior, including the automatic processing of information that is hardly conscious to an agent him/herself but that reliably manifests across cultural groups when they engage in certain actions or engage in self-relevant situations.

Importantly, emotions do start from such an automatic assessment or appraisal of a situation (Zajonc 1984), accompanied by a neural regulatory process, followed by subjective experiences that are instantiated, adjusted, qualified, and modified, within a split second, to achieve socially adaptive ends in a given context (Oatley, Keltner, and Jenkins 2006). Therefore, especially in the science of emotion, a contrastive and comparative cultural approach can speak to possible ways in which human emotion is diverse. In this chapter, we indicate which of the two approaches a referred study mainly depends on, while acknowledging their practical continuity. When referring to comparative studies, a theory about diversity we mainly rely on in this chapter is the theory of the cultural self.

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3 Culture and the self

Triandis (1989) theoretically located the psychological core of culture in its subjective elements, such as values, roles, and attitudes, termed a *cultural syndrome*, to indicate the theme a group of individuals having a certain set of subjective elements share. *Individualism-collectivism* is a syndrome of ideas indicating that individuals are the units of analysis and are autonomous (individualism), or ideas indicating that groups are the unit of analysis and individuals are tightly intertwined parts of these groups (Triandis 1989, 1990, 2001).

Coinciding with such a psychological approach to culture, out of an interdisciplinary collaboration between anthropology, psychology and linguistics emerged cultural psychology (Schweder and Sullivan 1993), which viewed culture as patterns of implicit and explicit behavior acquired and transmitted by symbols (Kroeber and Kluckhohn 1952) that allowed it to be transmitted and ingrained in non-subjective products such as institutions and practices. On top of this, cultural psychology took into account the self (*I*)-process (psychological process in operation as an agent of action) beyond the Jamesian *Me* (reflectively objectified, describable self-image) in the study of culture and psychology (Adams and Markus 2001), which is a critical perspective that considers the nature of emotion as involving non-self-reflective processes.

Individualistic or collectivistic cultural syndromes shape our self-processes such as perception (focusing on spoken content or tone) and emotion (frequent experiences of pride or respect), through daily situations and practices we encounter (logical discussion vs. harmony-maintaining talk), which in turn are guided by the available institutions and products (classroom debate vs. taking turns in groups to clean up a classroom), which are further governed by societal factors and pervasive ideas (having your own opinion is good vs. being a responsible member is good) that are usually non-conscious to individual members. The independence or interdependence of the self (Markus and Kitayama 1991) is culturally constructed, constructing ideas about the ways of being that are predominantly shared, encouraged, and used when members are to act as a full-fledged person in so-called individualistic or collectivistic cultural contexts. Aiming to understand the nature of this cultural self, an extensive body of research has been conducted on cognition, emotion, and motivation across cultures (Kitayama and Cohen 2010).

4 Meaning and perception

Language has a strong effect on how we construe our understandings of the world. Interesting demonstrations of this recently offered both behavioral and neuro-physiological evidence regarding simple perceptions of anonymous objects. Masuda et al. (2017) presented pictures of pairs of objects for which the approach to naming differs between two languages and appears idiosyncratic to speakers of the other language, and asked participants to say how similar or different the objects were. “Bags” can have different names in Japanese, depending on their material (a plastic bag is called a *fukuro*, while a tote bag is called a *kaban*). The researchers presented paired pictures of a plastic bag and a tote bag and asked participants to write down the names of the objects and say whether they were iden-

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tical or different using a nine-point subjective scale. This language contrast showed that when the language did not have distinct words for the paired objects, its speakers rated the objects as more similar than did those whose language had separate words. Interestingly, when participants were told to focus on the objects' function and visual similarity, instead of explicitly naming the objects, they still exhibited this effect, suggesting that the linguistic labels were accessed even when not explicitly used.

Athanasopoulos et al. (2010) contrasted Greek long stayers in the UK to Greek short stayers, and to native English speakers, on mismatch negativity, a brain potential elicited by the neural processing of deviant stimuli in a sequence of color patches. The Greek language has distinct words for light and dark blue, while English has only one word for blue. In the sequence of dark to light color patches, Greeks, compared to English natives, exhibited larger mismatch negativity on perceiving even subtle lightening. Moreover, long stayers, compared to short stayers, exhibited a dimming of the effect; more exposure to English may have blurred the distinction between shades. Because mismatch negativity is an automatic, pre-attentive response rather than a subjective rating of similarity, this evidence makes a case that the language effect on similarity judgment is implicated in early cognitive processing of perception. The results supported this view; the distinction reflected in the mismatch negativity was largest in short stayers, followed by long stayers and then native English speakers.

Language guides how we carve up the physical world. Further, symbolized meanings conveyed by language guide us in processing incoming information about social situations, such as when perceiving others' behavior. Ross, Xun, and Wilson (2002) compared a group of Chinese-born students in Canada, who were instructed in either Chinese or English on multiple measures such as self-perception, value endorsement, self-evaluation, and self-esteem. Across these self-measures, participants who responded in Chinese showed higher agreement with Chinese values, lower self-esteem, described themselves in a more collective manner, and reported balanced emotions, all of which resembled typical East Asian mono-cultural results, compared to those who responded in English. Those who responded in English, despite being Chinese, responded similarly to the European Canadian sample. These results are indicative of how language can be linked with our self.

5 Meaning and emotion

Emotion studies first described cultural diversity during the early 20th century. These anthropological, contrastive works mainly focused on demonstrating diversity and indicating limitations in mainstream American understandings of emotion (Benedict 1946). Then came the modern revival of the Darwinian approach that searched for an evolved and thus universal physical and neuroanatomically instantiated unitary system of emotion. Ekman (1972) used behavioral measures such as facial expression and autonomic nervous system activities to claim a biological basis for emotions in the mid-20th century and onwards. While anthropological studies gave large credit in the study of emotion to language, leading to the cultural meaning of emotion, the Darwinian approach stressed the idea of a physiological, thus language-free, mechanism of emotion.

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Later in the 20th century, the field witnessed an expansion of various schools of research that used multiple manifestations of physical and phenomenological processes of emotion (Lazarus 1991; Scherer 1997). Most surviving theories agree that the ways people implicitly and explicitly appraise what goes on around the self trigger emotional processes that encompass subjective experience with biological and behavioral consequences (Campos and Keltner 2014), and that these appraisals can adjust the sophisticated, mutually linked processes that give rise to them (Barrett et al. 2007). The self plays a key role in this appraisal process by operating one's attention, mediating one's interpretation, and adjusting the consequences such that the self can be adaptive in one's social environment (Oatley et al. 2006). These approaches take language as a component of emotional experience, in that language provides a cognitive framework for carving up the physical reality of emotion.

The social constructionist approach to emotion is the clearest protagonist to claim the inseparability of emotion and culture through meanings and modes of self. It maintains that the subjective intensity of culturally prescribed emotions is stronger than that of non-prescribed ones (Kitayama, Mesquita, and Karasawa 2006), and that culturally meaningful appraisals of antecedent events intensify certain social emotions only among the members of certain cultures (Leung and Cohen 2011). The subjective experience of emotion is influenced by culturally meaningful assessments of immediate situations (Hitokoto 2016). Social constructionists also stress the importance of language to emotion, but they further regard the social functions of meaning conveyed by language to adjust the emotional experience. This school of research sought to find cultural diversity in one of the most *agreed* upon (Ekman 1972) positive emotions according to the universalistic approach to emotion: happiness.

6 Comparative study of happiness

The United Nations (2011) has taken the valuable step of focusing on individual welfare over economics in defining societal success. Scientific support for this political movement was found in the application of subjective well-being measures that provided national-level data on general happiness (Diener 2013), predominantly using either well-being scales or items of overall well-being across many countries.

However, there are also systematic cultural variations in the scores, such as a strong positive correlation with individualism (Diener, Diener, and Diener 1995). As operationalized by a small number of items, the essence of the score is basically peoples' self-reflected response to general statements about the overall goodness of life up to that moment. The premise of this measure is that the positive state of happiness resides within the individual, and that participants can report on it by reflecting about themselves. The problem lies in the fact that the cognitive process involved in doing so is more common in independent cultures, where mutual acknowledgment of the self is valued and practiced to the extent that everyday greetings can reasonably start by asking whether one is feeling happy.

Surely, the members of interdependent cultures conceptualize, feel and use words translatable to the English word "happiness", but the frequency of their use, accompanying

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events, socially acceptable expressions, other accompanying emotions, subjective nuances implied, and the ways the words developed out of a context involving all of these, can be very different. Simply asking whether a person is happy can conjure up very different psychological realities in different cultures. A construct measured by a question asking whether one is happy might be a functional universal (Norenzayan and Heine 2005; certain members of certain cultures are not well able to say "I am happy") or, as recent studies attest, might well be an existential universal (i.e., happy individuals may be related with others in one culture, but self-satisfying in another culture; Hitokoto and Uchida 2018).

Uchida and Kitayama (2009) collected words and statements related to happiness among American and Japanese students by prompting them to think about different aspects, features, or effects of happiness. The collected words were used as stimuli for other groups of students in the two cultures, who were instructed to map out similarities and differences to form meaningful clusters. Using cards, they re-constructed cognitive maps for both cultural groups. The initial word collection ended with American students producing more predominantly desirable statements (98 % positive) than Japanese (66 %). The second mapping showed that American semantic space for overall happiness was closely related to personal achievement, while that of Japanese was related to social harmony.

Of the initial words in Japanese, 34 % had non-positive connotations of happiness. One non-positive type was named *transcendental reappraisal*, and included phrases such as "avoidance (e.g., letting people avoid the reality), nihilism (e.g., not lasting long), and transcendental realization (e.g., elusive, difficult to identify)" (Uchida and Kitayama 2009: 445). Another non-positive type was termed *social disruption*, including "negative social consequences (e.g., envy and jealousy) and inattention (e.g., failing to pay enough attention to the surroundings)" (Uchida and Kitayama 2009: 445). These implications of happiness among Japanese students indicate the existence of cultural nuances that are functional in achieving interdependence. Further, Uchida (2010) found that agreement with these two types positively correlated with dialecticism among Japanese students, indicating that when they endorsed ideas like "Everything in the world is intertwined in a causal relationship" or "We should avoid going to extremes" (Uchida and Kitayama 2009: 242), they also agreed on the non-positive side of happiness.

7 Comparative study of positive emotion words

Broadly speaking, the concept of happiness is part of a positive emotional domain of human emotional experience. Campos and Keltner (2014) constructed a lexical map to explore the semantic cluster of positive emotions in the US, using free-sorting of positive emotion words. They empirically came up with the basic categories of amusement, awe, contentment, gratitude, interest, love, joy, and pride. Replicating the method in Japan using Japanese emotion words, Sugawara, Muto, and Sugie (2018) came up with the basic clusters of love, wonder, awe/respect, peacefulness/joy, enthusiasm, and pride. They further found two higher clusters above the six, which were named *other-oriented positive emotions* and *self-oriented positive emotions*, indicating that the Japanese positive emotion words revolve around a dimension with a focus on either the self or the other. Considering the American

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finding that self-oriented "Joy" and relationship-oriented "Love" were the higher categories (Shaver et al. 1987), the self-other distinction could be a strong semantic schema for how people conceptualize positive emotions across the East and West (Kitayama et al. 2000). Cultural self, therefore, can be considered to operate in such a conceptual dimension as to systematically vary our emotional experience.

8 Comparative study of social emotions

Social emotions are the type of emotions involving self-consciousness and a social inference about what others might think or feel (Tangney and Fischer 1995); therefore, the self-other dimension plays a pivotal role in experience. An example of this kind is shame, guilt, or pride ("I made a mistake in front of others", "He/she might have suffered from my misconduct", "I did something to be acknowledged by others", etc.). Cognitive appraisals leading to such emotions have certain common ground across cultures, such as appraisal of the unexpected, what caused an event, whether something is unfair, and so on. At the same time, appraisal of "Immorality" has geo-political regional differences (Scherer 1997), suggesting that the extent to which people regard immorality to be an emotional situation is subject to cultural variation.

Emotions of anger, disgust, and contempt can be moral emotions when they are felt in response to either violation of someone's freedom (moral rhetoric of Autonomy), purity (moral rhetoric of Divinity), or conventions (moral rhetoric of Community) in a social context (Rozin et al. 1999). Vasquez et al. (2001) asked American and Filipino students to list rules of behavior that belong to each of the three rhetorics. As it turns out, while Filipino students nominated equal numbers of rules for the three rhetorics, American students more readily nominated rules about Autonomy. The result suggests that accessible morality is subject to the cultural self when it comes to being autonomous and independent.

Boiger et al. (2013) collected antecedent events of a self-conscious emotion of shame and had Japanese and American students assess the emotion-eliciting power of each situation. Assessing the similarity of 40 situations across the two countries, they came up with cross-culturally common dimensions, as well as dimensions indicated by either group to be more powerful. While American students' shame elicitation centered on events caused by others that revealed one's personal flaws, that of Japanese students centered on losing face in public through events caused by one's own faults. Shame is an emotion elicited by actual or imagined loss of one's social evaluation and is culturally colored by the American notion of selfhood – asserting a positive sense of self – and the Japanese notion – maintaining social standing by carefully monitoring one's public actions. Cultural self is considered to guide the central meaning that anchors a self-conscious emotion in each culture.

In response to a favor from a benefactor, a recipient feels gratitude and, more or less, an obligatory feeling of indebtedness, or a form of guilt, to the benefactor. This indebtedness involves an appraisal of the relational concern, or the anxious feeling that receiving help might have caused some disharmony between the self and the benefactor, since the latter might have been bothered by offering help due to paying some kind of cost. This relational concern is stronger for Japanese than Americans (Hitokoto 2016) when both

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groups are presented with hypothetical everyday situations of receiving help. The result indicates that interdependence of the self comes into play in response to the everyday interaction via weighting relevant appraisals to fit the culturally prescribed pattern of emotional experience.

Interestingly, there is also evidence that social emotions may exist without specific language labels attached to describe the emotions. Rara'muri Indians in Mexico have only a single word for guilt and shame. Breugelmans and Poortings (2006) collected and contrasted emotional situations from both Rara'muri and Javanese. They then presented other Rara'muri and Javanese with both guilt- and shame-related situations as defined by Dutch and Indonesian ratings and had them rate subjective experiences (words such as “bad person” or “center of attention”) and behavioral tendencies (words such as “apologizing” or “hiding”) relevant to guilt and shame. They found that the ratings of these features formed two clusters that indicate guilt and shame, regardless of the group. The result seems to indicate that the self-conscious emotion of guilt and shame can be identified, despite the absence of a label.

This evidence may reveal that social emotions precede emotion words. Similarly, another social emotion, envy, can be translated into distinct words in Japanese: *Urayami* and *Netami* (Hitokoto and Sawada 2016). According to Smith (2013), envy does have two subtypes when considering their positive and negative functions: benign envy (admiring someone and motivating improvement) and malicious envy (ill-feeling towards the advantaged, leading to aggression), the Japanese equivalent of *Urayami* and *Netami*, respectively. It is an interesting fact that while English requires additional prefixes to tell the difference, Japanese already had words for each. Considering that emotion words reflect prototypes of experience about which a particular society finds it useful to talk, this might be the result of the interdependent focus on relationally engaged emotions (Kitayama et al. 2000), which lead Japanese to *hyper-cognize* the two, while individualistic/English-speaking cultures, where positively regarding each other’s uniqueness is the cultural convention of communication, may be *hypo-cognized* to obscure them, thereby long being reluctant to differentiate the two in their emotion lexicon. In fact, recent study showed that interdependent self uniquely explained malicious envy in the classroom of Japanese students (Hitokoto & Sawada, 2021). This argument leads to an understanding that how we perceive an emotion is guided by shared understandings about what information we should use to carve up and come to perceive emotional reality.

9 Comparative study of perception of emotions

Perceiving an emotion involves a different psychological process than expressing an emotion, and this cognitive process is influenced by meanings of emotions. The universality of expression and its perception constituted the main evidence for Ekman (1972) to claim an evolutionary basis for emotions. This was because the existence of the residuals of evolutionary adaptive actions, specifically, emotional expression and accompanying physiological changes that all humans can perceive and communicate across cultures, can be attributed to the connection humans have to our ancestors.

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Russell (1994) pointed out several methodological limitations in the original cross-cultural data of Ekman (1972), including the forced choice paradigm that asked participants to choose the correct emotion from six canonical emotion words (Happy, Surprised, Sad, Angry, Disgusted, and Fear, translated into the local language) related to images of facial expressions. He used open-ended questions to ask local participants to name the emotion they perceived in the facial expressions, which resulted in significantly lower agreement across cultures. Further, Elfenbein and Ambady's (2002) meta-analysis found that when the culture of the poser of an expression and the culture of the perceiver is close, the recognition rate increased to a certain extent. This in-group advantage indicates the existence of a sort of dialect of facial expression that is shared and transmitted across close cultures and used as a framework when perceiving others' emotions. Lindquist et al. (2006) experimentally manipulated participants' temporal access to emotion words and found that under a condition with no explicit reference to words, participants showed impaired performance in categorizing emotional expressions. This supports the idea that the perception of emotions is influenced by the linguistic categorizations the available language offers to depict an emotion and cautions against treating facial behavior as the sole source of emotion categories.

Jack, Garrod, and Yu (2012) extracted a dialect in facial expressions contrasting the culture of the poser and the perceiver. They created computer-generated motion pictures of both European and Asian faces and animated their expressions to express every subtlety of basic emotions. They presented the brief expressive motions to both European Americans and Asians and required them to choose which of the six basic emotions they saw and to rate their perceived intensity. The similarity in these data was reconstructed to indicate contrasts in the two groups. They found that European Americans were better than Asians at categorizing facial movements into the canonical six *basic emotions*, violating the assumption of a strongly universalistic view of expression perception, and that the groups altered their ratings based on movements of different facial muscles (Jack, Caldara, and Schyns 2012). For example, for a happy expression, while European Americans tended to focus on the cheeks, Asians focused on the eyes. For sadness, Asians focused more on the mouth. These results overlap with those of Yuki, Maddux, and Masuda (2007) on Japanese-American contrasts of focusing on either the eyes or the mouth in deciding the level of happiness of a schematic smile. While a smile is a cross-culturally recognizable facial expression of positive emotion, these findings may explain why East Asians are often misunderstood as less expressive, especially by Westerners, who may have focused on different parts of the face than Asians.

Studies on vocal emotion recognition also support the dialect theory of emotion perception in language use. Paulmann and Uskul (2014) used Chinese and British utterances to require the listeners of the two cultural groups living in England to indicate what emotion was expressed in the pseudo utterance. Recognition rates showed an ingroup advantage, such that when a culturally familiar utterance was used, the members familiar with the culture showed increased recognition. Further, Jiang et al. (2015), using a paradigm to examine when a group (English vs. Hindi-English bilingual Hindi participants) difference emerged in the timespan of processing the acoustic information, found that ingroup advantage occurs in as early as 400 ms to 500 ms. Further, the bilingual Hindi showed a positive

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correlation between proficiency in English and both the speed and the accuracy of the recognition of English emotional expressions, suggesting the nature of the *dialect* as learned by language use.

Perception of emotions can also be achieved by listening to tone of voice. Ishii, Reyes, and Kitayama (2003) asked Japanese and American students to attend to emotion words uttered in different emotional tones. They created a Stroop stimulus combining either positive (happy) or negative (sad) words with positive (smooth and round) or negative (harsh and constricted) tones of voice. A Stroop task is a cognitive task requiring participants to engage in a detection of one feature in a stimulus that comes with other information to ignore. An example would be a task to read out the color in which the word "RED" is written in blue ink. The delay we experience in this task, as compared to the task of reading out the color in which the word "RED" is written in red ink, can be understood as interference with the to-be-ignored word processing by the required color processing, showing how word processing is strongly automatic. They had both groups of students repeatedly engage in one of two tasks: naming the valence of the content, or of the tone. Because both effects came in one stimulus, experimenters could calculate the difficulty each participant had in ignoring one feature while attending to the other, which they called *interference*. Comparisons showed that Americans experienced less interference during content judgment, while Japanese experienced less during tone judgment. This finding indicated habituated practices in language use: Americans using English in low-context communication focused on what was said, while Japanese using Japanese in high-context communication generalized cues to circumstantial information such as how something was said.

The degree to which context is taken into account in emotion perception varies by culture. Masuda et al. (2008) presented a picture of a smiling character placed in a context in which others expressed the same or different emotions. Japanese and American students contrasted in their perceptions of the character's happiness. While American students' perception was constant across different backgrounds, that of Japanese varied: their rating of happiness was highest when others also smiled. This indicates that the Japanese perception of happiness strongly implies being happy along with others, which is different from the American perception.

Ishii et al. (2011) tested whether Americans and Japanese would perceive a change in a facial expression of happiness differently. They created, using a picture-morphing technique, a facial movement stimulus using both a Japanese and a European American face, gradually changing the facial expression from happy to neutral. Participants were told to specify the moment when the happy face was perceived to have disappeared. Interestingly, Japanese were quicker to name the disappearance of the happy face. The offset time also positively correlated with an anxious attachment style, a style of interpersonal relationship marked by fear of rejection, across both Japanese and American students. In other words, Japanese are more anxious about rejection as compared to Americans, and this anxiety is related to the quicker offset, or sensitivity to a facial sign that the other has ceased to accept the self.

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10 Comparative study of emotion regulation

Emotion displays are regulated in our society in various ways (Ekman 1972). Regulation has versions, including enhancing, suppressing, neutralizing, or masking what is actually felt. To achieve control depending on social demand, one can either reappraise about an emotion-eliciting situation in his/her mind, or simply suppress it so that inner feelings will not spill out in public. Across more than 20 countries, Matsumoto et al. (2008) found the two types of regulation, especially the use of suppression, are correlated with cultural value orientations with high power distance (Hofstede 2001) or low egalitarianism (Schwartz and Sagiv 1995), and the two types of regulation are correlated with each other in cultures with high long-term orientation and low affective autonomy, value features prevalent in East Asia.

A well-known stereotype of East Asians, from Hollywood to the street, is that they are good at suppressing emotions. While stereotypes are not true, East Asians do seem to have an advantage in suppressing emotions when needed. Murata, Moser, and Kitayama (2012) have identified that East Asians, as compared to European Americans, utilized neural-level emotion regulation when presented with an emotionally negative stimulus and told to suppress their emotions. Specifically, the researchers presented both groups of participants with negative emotion-eliciting pictures, defined by the International Affect Picture System, and told a randomly chosen half to "attend" while telling the other half to "suppress" their emotions. They found that Asians showed a stronger regulatory process (i.e., parietal late positive potential) under the "suppress" condition, and that this regulation took place earlier than it did in the European Americans. Their finding corroborates with Ma, Tamir, and Miyamoto (2018), who compared European Americans to Asians and found that the former see a higher utility in positive emotions, therefore, savor positive emotions after a demanding task. This suggests how emotion regulation is believed to work as an instrument to achieve a desired end and is dependent on culture.

11 Culture-individual fit of emotion

As explained in the first part of this chapter, culture is not only about individual endorsement of values, but patterns of implicit and explicit behaviors in a society. If this is the case, those individuals with selves more fitted to the cultural context should fare better than others. De Leersnyder, Mesquita, and Kim (2011) argued that emotions are part of one's larger cultural system, which socially constructs the core meanings of the very unfolding of emotions. They used immigrants (Koreans or Turks) and the members of a host culture (Americans or Belgians), and had them rate various emotion words (happy, sad, angry, calm, and so on) in terms of the frequency of experience in daily life. Interestingly, immigrants who reported similar patterns (reported the same kinds of emotions, and to the same extent) of engaged or disengaged (Kitayama, Markus, and Kurokawa 2000) emotional experiences as the average members of the host culture tended to have more host cultural acquaintances, as well as a greater sense of adaptation to the host culture, exhibiting efficiency in fit.

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Culture is a shared meaning system in which individual members subscribe to shared ideas to engage in meaningful actions that sustain group life, helping and reciprocating with one another. Leung and Cohen (2011) measured real-world reciprocation to a benefactor, who was in fact a confederate who provided a small gift to the participants. After a video observation and attitude rating, this benefactor left the room while dropping a valuable item, which the participants were solicited to give back by following the benefactor as far as they could go despite several obstacles along the way. The experiment compared Northern and Southern American as well as Asian American students. The American South encourages honor-defending violence (Nisbett and Cohen 1996). It turned out that Southerners who endorsed an act of honor-defending violence depicted in the video tended to show strong reciprocation behavior, while Northerners and Asian Americans who endorsed honor violence did not show such a pattern. The study did not measure emotions during this reciprocation; however, assuming that such behavior was motivated by some pro-social emotion (honor-related emotion, such as indebtedness), the results are suggestive about how culture may inform individual emotional action based on the cultural logic (valuing honor *means* to reciprocate a benefactor no matter what, etc.) available to the members. Those who learned such ideas or meanings and acquired actions that would actualize those ideas would behave pro-socially in their respective daily life.

12 Bilinguals

Meaning plays a significant role in the subjective experience of emotion (Barrett, Lindquist, and Gendron 2007). A stringent test of the impact of meaning on emotion and behavior can be achieved using individuals having different cultural meanings within themselves, such as bilinguals, and examining if they behave differently depending on access to either of two or more cultural meanings (Hong et al. 2000).

Bilinguals, or multilinguals in general, are individual products of globalization (Berry 2008). The word *bilingual* (or *multilingual*) offers only a crude way to describe the diversity of individual variation included in the category (Pavlenko 2006). Such individuals not only can use different languages, but also seem to have two or more cultural mindsets. For example, Lai and Boroditsky (2013) contrasted how Chinese Mandarin-English bilinguals, and Mandarin and English monolinguals, interpreted the sentence, "Next Wednesday's meeting has been moved forward two days". The word "forward" can be taken as either ego moving or time moving. The former is common in English, in which time is conceived as stationary and the *ego* moves along the timeline toward the future. In this perspective, people construe the sentence to understand that the meeting is moved to Friday: later than Wednesday, since forward is ahead of the self. The reverse is common in Mandarin, in which the observer is stationary and time is conceived as moving past the observer, from future to past. In this perspective, people construe the sentence to mean the meeting is moved to Monday: before Wednesday, since "forward" involves rewinding the timeline. While the two groups of monolinguals followed their language's typical understanding (0 % of Mandarin monolinguals selected Friday, while 68 % of English speakers selected Friday), bilinguals fell in the middle (38 % selected Friday) of the two.

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13 Bilinguals and the switching of the self

Bilinguals' twofold cultural mindsets can allow them to entirely shift the self, depending on cultural cues. Specifically, bilinguals can alter their ways of thinking (Briley, Morris, and Simonson 2005), feeling (Harris, Gleason, and Aycicegi 2006; Heine et al. 2001), and acting (Sussman and Rosenfeld 1982), depending on cultural cues. This is called *cultural (frame) switching*, and strongly suggests that at the individual level, culture can take a form of scripted knowledge that is learned and acquired through engaging in cultural practices. Perunovic, Heller, and Rafaeli (2007) monitored East-Asian Canadians using a diary survey collecting data three times a day for ten consecutive days; when they spoke an Asian language, they showed positive correlation between positive and negative emotions, the typical East Asian emotional pattern (Kitayama et al. 2000), while when they spoke a non-Asian language, the two emotions correlated negatively. Language can afford a relevant cultural self in daily practice.

Hong et al. (2000) showed that cultural priming – presenting cues that hinted at certain cultural symbols – had an impact on causal attributions, or how people explained others' behavior, across cultures (Oyserman, Coon, and Kemmelmeier 2002). The cultural priming used was a collection of symbols designating either America or China, such as national flags, national buildings, and pictures of iconic individuals. Briefly presenting either set to bilinguals familiar with both could temporarily shift their access to culturally scripted knowledge; bilinguals explained the movement of a fictitious fish on a screen swimming separately from other fishes as motivated by external (typical East Asian explanation) or internal (typical European American explanation) force, corresponding to the cultural manipulation.

14 Type of bilinguals and the switching of cognitive processes in the self

Researchers have identified a distinction between *compound bilinguals* and *coordinate bilinguals* (Ervin and Osgood 1954; Pavlenko 2006). Compound bilingual refers to an individual who learned two or more languages from early on in one context, and who has idiosyncratic representations for a verbal label and its translated equivalent. Second-generation Asian Americans born in the US, for example, are compound bilinguals if they grew up learning and using both an Asian language and English in the American context. On the other hand, coordinate bilingual refers to an individual who learned a second language in a context different from, and later than, her first language, and who has different representations for each language. Asian sojourners visiting the US, for example, can be coordinate bilinguals if they learned an Asian language in their home country before moving to the US to learn English. To be a coordinate bilingual, one need not go abroad, but may learn a second language in a classroom, and this second language experience will be independent in context from the first. These two types of bilinguals seem to differ not only in timing of learning the second language, but also in terms of susceptibility to cultural switching.

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Lai, Rodriguez, and Narasimhan (2014) contrasted both Spanish-English bilinguals and monolinguals regarding perceptions of a moving object, using Spanish or English. When describing motion, Spanish often encodes the trajectory in the main verb and the manner in a gerundial phrase (path preference), such as "the bottle entered the cave floating". English often does this by encoding the manner of motion in the main verb and the path outside the main verb with a prepositional phrase (manner preference), as in "the bottle floated out of the cave". They presented participants with animated movements of an apple-like character, varying its path (from left to right) and manner (rolling), narrated in either language. They then asked participants to choose which subsequent animation looked like the previous one: the character jumping toward the right (same path as the target) or the character rolling to the left (same manner as the target). Choosing the former was counted as path preference, while the latter was counted as manner preference. Spanish-instructed group, as compared to English-instructed group, participants tended toward path over manner preference, regardless of whether they were bilingual or monolingual, suggesting a main effect of language. Further dividing the bilinguals into early and late learners (those who learned English as a second language before/after the age of six), early learners showed a path preference regardless of language condition, whereas late learners switched their preference depending on the language: manner preference was observed among those tested in English, but path preference was observed among those tested in Spanish. This suggests that connections between language and explanatory style are stronger for coordinate bilinguals. Explanatory style likely involves the ways in which individuals understand agents in the real world. If so, can enhanced switching in coordinate bilinguals be observed in cultural self-measures as well?

Ross et al. (2002) contrasted instructional language (English vs. Chinese) effects on statements about the self using Chinese-born Chinese, and Canadian-born Chinese responding in English only. The latter group, who could be considered compound bilinguals, showed negligible differences from the European-Canadian group, while the Chinese-born Chinese instructed in Chinese or English responded differently depending on the language of instruction. Unfortunately, the study did not include Canadian-born Chinese responding in Chinese, so whether compound bilinguals did not switch was not clear. However, a hypothesis can be drawn from this suggestive study: the two types of bilinguals may have differed in susceptibility to cultural switching, with compound bilinguals being resistant (which was not tested), and coordinate bilinguals (Chinese-born Chinese) being susceptible.

Ji, Zhang, and Nisbett (2004) tested this possibility in a between-participant design where they fully crossed the two factors – bilingual type and instructional language – contrasting Hong Kong and Singapore Chinese as compound bilinguals and mainland and Taiwan Chinese as coordinate bilinguals, according to their educational difference in the start of English as a second language. The two groups were further divided into those instructed in either English or Chinese in a task measuring analytic-holistic thinking styles. Participants categorized two out of three objects, such as monkey, panda, and banana. Analytic categorization, prevalent in Western countries, categorizes monkeys with pandas as sharing the abstract characteristic of being an animal. Holistic categorization, prevalent in East Asian countries, categorizes monkeys with bananas, for monkeys eat bananas and

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thus are related. While coordinate bilinguals (mainland and Taiwan Chinese) showed significant differences between the two instructional languages, compound bilinguals' (Hong Kong and Singapore Chinese) responses fell between those of the mainland and Taiwan Chinese and European Americans, with a slight preference for holistic categorization. These results convincingly suggest that the type of bilingualism has an impact on switching.

At first glance, compound bilinguals might be expected to switch more because their early fluency in both languages opens paths to behaving in different ways, thereby *promoting* cultural switching. However, coordinate bilinguals learn a different language in a different context. Their associations between language and cultural meanings are more strongly contextualized than those of compound bilinguals, and they need to maneuver between two relatively independent knowledge structures, which is implicated in their use of executive function during a task (Bialystok et al. 2004). To the extent that language works as an operant behavior actualizing adaptive changes prompted by the immediate environment, and that culture is what demands those adaptive changes, contextually learned language (Caldwell-Harris 2014) should retain its power to summon the cultural self needed, and the summons should be stronger among coordinate bilinguals. In accord with this reasoning, compound bilinguals use highly overlapped regions within Broca's area, the neural circuit for expressive language during a task to recollect what happened to the self yesterday across two languages (Kim et al. 1997). Compound bilinguals use different languages from early on, but the difference is not implicated in their self-reflective cognitive process.

Where, then, does compound bilinguals' unitary self come from? One clue can be found in a study using Tagalog-English compound bilinguals. If compound bilinguals are resistant to switching, such bilinguals living in the Philippines and sharing meaning with other Filipinos in their daily life should demonstrate interdependence of the self even if tested in English. This was the case in Ishii et al.'s (2003) study, where Tagalog-English Filipino bilinguals showed, regardless of testing language, less interference in vocal tone judgment: a typical East Asian response. They did not specifically compare the two types of bilinguals; however, the spontaneous nature of the attention test may indicate that compound bilinguals possess an interdependent way of focusing on tone, created through a Filipino cultural context requiring them to engage in a high-context communication style. Therefore, compound bilinguals' self would be constructed by their familiar daily practice.

15 Type of bilinguals and the switching of emotional processes in the self

Few studies speak to the emotional aspect of cultural self among bilinguals. Positive regard of the self is an emotional process of the self (Baumeister and Leary 1995). Kitayama et al. (1997) presented Japanese-produced and American-produced descriptions of situational events that made people increase/decrease their self-esteem to groups of Japanese in Kyoto, Japanese in Oregon, and Americans in Oregon. They had the three groups rate the degree to which they would expect their self-esteem to rise or fall in each situation. Independent of the main effects of both participant (overall, American raters chose self-esteem

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raising more than Japanese raters) and situation origin (American situations were more self-esteem inducing than Japanese situations), an interaction effect was significant in that when respective members of either culture rated familiar cultural situations, the cultural trend enhanced: Americans increased their self-esteem, and Japanese decreased theirs. On top of this, Japanese in Eugene, presumably coordinate bilinguals, showed cultural switching induced by the origins of the situations, tending to increase self-esteem in American situations, but decrease self-esteem in Japanese situations. Although what was manipulated was not language but situations, the behavior observed in this group is informative since all situations were presented in English, and the stimuli represented common cultural practices in respective daily life. Visualizing the events induced different cultural selves (high or low self-esteem) in these presumably coordinate bilingual Japanese, which suggests that the context afforded the cultural self.

Hitokoto, Glazer, and Kitayama (2016) used line drawn faces, a minimal social cue, to prime participants with subtle meanings about "others" to see whether subsequent emotional cognitive processing would be affected. The rationale was that the meaning attached to "others" varies across cultures. Among European Americans, "others" may be positive and accepting, for within an independent cultural context, mutual confirmation of inner positivity is valued. In contrast, East Asian culture, or Asian Americans, would imbue "other" with a meaning that is potentially critical and has expectations on the self, for within interdependent cultural contexts, others often represent social norms one must maintain for social standing. They compared groups of Asian American students from the US, Asian sojourner students in the US, and European American students in the US while the students engaged in a simple gambling task. In the task, they were required to pick a card from a presented pair, and then passively observe the two cards get flipped, where they saw either plus or minus points written on their backs. Once flipped, participants saw whether the card they just chose had gained or lost a point. Upon observing the gain or loss, their event-related potential – feedback contingent responses such as negative potential (predominantly reactive to the loss) or positive potential (reactive to the gain) – were measured. These brain waves indicated the instant activation of the behavior monitoring system, which reflected the earliest process to experiencing positive or negative results of their behavior (choice), automatically assessed against the expected results of gaining a score. Some trials were conducted after a brief presentation of a schematic face, priming participants for "others" in a minimal form, and other trials presented a scrambled nonface as control. The results supported the hypothesized contrast between Asian Americans and European Americans, the former showing a larger negative potential than the latter under the priming condition. Importantly, the Asian Americans, presumably compound bilinguals, showed the typical Asian reaction after seeing the face, whereas the Asian sojourners, presumably coordinate bilinguals, showed an intermediate response between Asian Americans and European Americans. These results may point to the fact that while the Asian Americans who were raised in the US in Asian families construed "others" as a threat, Asian sojourners visiting the US construed "others" in intermediate ways. Although the study was not designed to manipulate culture switching, the intermediate response of Asian sojourners may be interpretable if we assume their bilingual type to be coordinate, and that coordinate bilinguals had twofold cultural meanings attached to "others".

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Due to a limited amount of evidence for the link between bilingualism and cultural self-measures, our argument remains tentative at best. As Ji et al. (2004) discussed regarding the difference they found between compound and coordinate bilinguals, the essential difference may be the way in which each type stores and accesses cultural knowledge: the former has an idiosyncratic meaning structure, mainly construed through daily practices, while the latter often has two or more relatively independent meaning structures they can access when cued, due to having acquired two cultural selves in ways that are strongly contingent on language. Future examinations should clarify if compound bilinguals are actually affected by idiosyncratic cultural practice, despite being in a position to utilize two languages, which would open up possibilities to experience or blend (Nguyen and Ahmadpanah 2014) multiple cultural practices, such as making foreign friends, thereby exposing themselves to different cultural contexts. Also, the ways coordinate bilinguals immerse into different cultural practices can vary, from a second language classroom to a long-term sojourn, and the effects attributable to these variations should not be treated as singular.

A counterexample to our analysis above is Hong et al.'s (2000) series of studies on Hong Kong Chinese bilinguals showing cultural switching, despite Ji et al. (2014) having treated them as compound bilinguals by education. Surely Hong Kong Chinese must be diverse, and there was a time gap between the two studies; however, there should be some evidence of Hong et al.'s (2000) samples containing more coordinate bilinguals than Ji et al.'s (2014), if bilingual type determines switching. Another possibility is that compound bilinguals proven immune to switching actually engage in cognitive control to maintain their original cultural modes of information processing. This possibility stands on the fact that they tend to have heightened cognitive control, as indicated by activities in both the dorsolateral prefrontal cortex (i.e., goal maintenance) and the superior parietal lobule (i.e., memory and somatosensory; Hernandez 2009), when engaging in a language task using one language. If the purpose of the cultural switching manipulation was too obvious to the compound bilinguals (Hong Kong Chinese), which may have been the case for Hong et al.'s (2000) stimulus using national flags and icons, as compared to studies using more implicit manipulations such as language or priming, compound bilinguals may have utilized cognitive control to intentionally use their original cultural behaviors. If so, compound bilinguals may be capable of switching at will, while coordinate bilinguals may be susceptible to switching triggered by cues.

Benet-Martinez et al. (2002) found, using general bilinguals, that in those with more *bicultural identity integration*, as compared to those with less, culture switching induced behavior more typical of the cued culture. If their evidence translates into cultural self-measures, coordinate bilinguals may be more integrated than compound bilinguals, and *bicultural identity* integration – the self-understanding that cultural aspects of the self are not opposed to each other – allows an individual to switch. Interplay between language and cultural self might be a function of how we organize our multiple cultural identities (Markus and Conner 2013).

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16 Cultural context as a learning environment

Bilingual studies of cultural selves show that repeated engagement in cultural practices and shared meanings can modulate our experience of cognitive emotional processes. How such processes are acquired and maintained is an interesting question.

Harris et al. (2006) contrasted Spanish-English compound bilinguals (Spanish who immigrated to the US by age seven) and coordinate bilinguals (Spanish who immigrated to the US later than age seven) on skin conductance responses when they were required to hear and read emotional words and phrases in either their first language (Spanish) or second language (English). Skin conductance responses are modulated by the autonomic nervous system, as they work in tandem to prepare a fight or flight response, evolved to achieve immediate activation of the body in response to emotional cues (i.e., encounter with a predator). The emotion words and phrases used were taboos, sexual terms, and childhood reprimands. They found that only among coordinate bilinguals, reprimands ("Go to your room!") expressed in their first language (Spanish), elicited larger skin conductance responses compared to their second language. That is, for coordinate bilinguals, emotional reactions to stimuli seemed to be separated by language, and more attached to their first language. However, for compound bilinguals, the difference between languages was negligible. The link between emotional process and language seemed to be mediated by how language automatically activates affective connotations (Degner, Doycheva, and Wentura 2012).

Counter to such a first-language-dominance hypothesis, Marian and Kaushanskaya (2008) asked immigrants about their immigration experience and found that when participants used their preferred language, or their second language, the number of emotion words increased as compared to the first language condition. However, the dependent variable used in this study was the emotion word utterance per se; it is possible that the second language buffers emotion, thus can be utilized to distance the self from an emotional event, manifesting as higher frequency of use depending on the theme.

Boroditsky (2001) contrasted and showed that the earlier Mandarin speakers acquired English (Chinese Mandarin-English bilinguals), the less they used vertical expressions of time (a Chinese way of understanding time flow), suggesting that language exposure, or cultural experience, had an impact on perceptions of time. Also, Imada, Carlson, and Itakura (2013) compared Japanese and American children aged four to nine on analytic and holistic attention, and found that after age four to five, cultural attention styles (Americans being more analytic, and Japanese being more holistic) emerged. Gauging by these studies, at around age five or later, when language becomes more sophisticated, communication and formal schooling in earnest seem to facilitate culturally scripted understandings and emotions.

The existence of such early socialization again indicates the notion that the cultural self is a learned mindset that helps individuals adapt to a given social context. This could be why Cheung, Chudek, and Heine (2011) observed, among Asian immigrants, that those who came to Canada early in life showed greater identification with Canadian culture, and also showed higher identification as the stay became longer. The sensitive period for cultur-

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al learning, interacting with the nature of cultural emotional adaptation (De Leersnyder et al. 2011), could create momentum for adapting to a given context.

Studies should examine more specific processes of acquiring cultural selves through daily practices, particularly focusing on the role of self-process, which accompanies cultural adaptation. This endeavor may also need to factor in the basic neural mechanism involved in the construction of emotional processes (Chee et al. 2011; Giedd et al. 1999). One recent approach of this kind can be found in a study comparing Asian immigrants in Canada (Liu, Rigoulot, and Pell 2017) with Chinese and Canadians. The first measure they used was the Stroop task involving active distinguishing of either emotional voice (fearful/sad voice) from facial expression (fearful/sad face), or facial expression from emotional voice. This task was employed to capture both the active behavioral interference of the to-be-ignored stimulus and the real-time semantic interference of such a stimulus, indicated by N400 component of the electro-encephalogram, involved in the semantic processing of a word. The second task was the Oddball paradigm, involving passive observation of a sequence of emotional faces (fearful face) coupled with congruent voices (fearful voice) that was occasionally interrupted by incongruency (sad face coupled with fearful voice). This latter task was to capture the passive emotional processing of incongruency, and was indicated by the mismatch negativity, another electro-encephalogram component emitted upon deviance perception. Because Western communication involves direct eye contact, direct speech, and expressive facial expression, an emotional face may interfere with voice judgement among typical Canadians. Also, because East Asian communication involves holistic linking of vocal cues to faces, a mismatch between the voice and the face should be processed with impact among typical Asians. The results supported the hypotheses above, and further, the length of stay in Canada positively correlated with all indicators, bringing the immigrants closer to the Canadian pattern. Also, while immigrants showed an overall average score resembling Canadians only for behavioral interference, their semantic interference (N400) and passive emotional processing of incongruency (mismatch negativity) both indicated similarity to the Chinese. This average pattern should indicate a modality difference in acculturation: behavioral modality may acculturate first, and then be followed by the acculturation of semantic processing. Cultural immersion studies of this kind may shed light into the very construction of the self, involving automatic processing of emotional stimuli.

17 Summary

We selectively reviewed comparative and contrastive emotion studies across different cultures and bilinguals (i) to elucidate how culturally shared meanings can shape how we process emotions, and (ii) to elucidate how those meanings are implicated in language and knowledge structures learned and stored within individuals. For the bilingual studies, future studies should also look closely into effects of the level of proficiency, learning method (academic vs. informal), age of acquisition, degree of the need to learn, functional distance of the languages they use, and culture identification (Roselli, Velez-Uribe, and Ardila 2017) as well as integration into the host culture. In doing so, the processes by which cultural

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meanings can be construed other than language per se (Ishii et al. 2003) into the self, which is not monolithic but has a modality layered structure, need to be revealed. Cultural self-studies, including recent neural studies that tap into the implicit level of language production and emotional processes, can further reveal ways in which our cultures are diverse, and how to construct peace based on fuller understandings of our various cultural selves.

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Jean-Marc Dewaele

58 Research into multilingualism and emotions

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Abstract: Multilinguals realise that expressing and recognising emotions can be challenging (Dewaele 2013, 2016; Pavlenko 2005). The differences lie in the different embodiment that the languages have (Pavlenko 2012), which affects the emotional resonance of the language. This affects the language choices of the multilinguals and their perceptions of emotional languages in various contexts. Moreover, their emotional reactions might be different depending on the language. Because different cultures express emotions in different ways, multilinguals sometimes struggle to recognise the emotional state of their interlocutor or to express their own emotions appropriately. This chapter will present an overview of recent research on language choices in romantic relationships, in therapeutic relationships, in inner speech, in multilingual swearing, in feelings of identity and belonging, and in emotion recognition in first and foreign languages.

1 Introduction

Humans experience and observe emotions communicated by those around them before they can speak. I remember being astonished by the powerful emotions expressed by my daughter Livia when she was a baby. She would go all red and hot and yell so loudly, waving her little arms and legs furiously, that my wife and I were taken aback by her avalanche of pre-verbal and non-verbal violence. We quickly learned to guess the causes of the emotional outbursts – hunger, thirst, discomfort – and when we guessed correctly, we were rewarded with a heart-melting smile and a little chuckle. As Livia grew up with four first languages (French with me, Dutch with my wife, English with everybody outside the home – except her childminder (baby-sitter) who spoke Urdu with her), we learned to decode her proto-words (except in Urdu). Livia realised that the same object was denoted

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by different words in her four languages. While still at the one-word stage, aged 1;3, she would point to the object she wanted which might be in a kitchen cupboard, typically a biscuit or a sweet, looking us in the eye, building up emotional tension, pointing again, getting worked up, and saying the word in French ("poupou", target: *bonbon*, 'sweet') to me, with strong stress, followed by the equivalent word in the other languages if I seemed unwilling to comply. If the desired object was visible, she would point at it and use a verb in the imperative form: aged 1;2 at her childminder's place, she pointed to a banana and said "bana", followed by "give!". She also greatly enjoyed the power of the word "no" in her languages. While none of these early words were emotion words, she could infuse them with great emotional power. Livia became equally good at reading our emotional states, not just from what we said, but how we said it (volume, pitch, speech rate), how our facial expression was, how we moved. She picked up swearwords from us and relished their power, such as the time she looked at me and exclaimed "*merde*!" ['shit'] with a straight face. I was about to tell her off until I remembered that she had probably picked the word up from me. By age 2, Livia's vocabularies in French, Dutch and English were blooming, and they were already multidimensional and multisensorial. Her words were rich in verbal, visual, olfactory, auditory and emotional associations. As a teenager, Livia learnt Spanish at school: her first foreign language, learnt in a classroom. She had to study hard, learning vocabulary and grammar explicitly. It remained an academic rather than a "lived" language and she dropped it after passing the national General Certificate of Secondary Education (GCSE) exams (age 16), so that it is rusty now.

Livia's story illustrates some of the most fascinating issues in multilingualism research including the infants' ability to pick up novel words in multiple languages (Singh et al. 2018). The way a language is learnt and possibly the age at which it is learnt has a profound and long-lasting effect on individuals' perception and use of their language(s).

Before plunging into current research on multilingualism and emotion, it is important to define some key concepts and to point out some key sources in this emerging field.

Firstly, I agree with Feldman Barrett (2017) that emotions are not universally expressed and recognised and do not live in distinct parts of the brain. They are instead "constructed in the moment, by core systems that interact across the whole brain, aided by a lifetime of learning" (Feldman Barrett 2017: i). Second, emotions do not have unique "fingerprints", meaning they defy simple measurement. An angry person may display very different patterns: "Some people fume in anger, but some cry. Others become quiet and cunning. Still others withdraw. Each behaviour [...] is supported by a different physiological pattern in the body" (Feldman Barrett 2017: 14).

This chapter follows Pavlenko (2008), who defined emotion words as words referring to particular affective states ("happy" and "angry") or processes ("to worry", "to rage"), distinguishing them from emotion-laden words which "do not refer to emotion directly but instead express or elicit emotion ('jerk' or 'loser') from the interlocutors ('cancer' or 'malignancy')" (Pavlenko 2008: 148).

These words have both semantic and conceptual representations. Pavlenko (2009) defined semantic representations as: "the largely implicit knowledge of: (1) the mapping between words and concepts determining how many concepts and which particular concepts are expressed by a particular word via polysemy or metaphoric extension and (2) connec-

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tions between words, which account for phenomena such as collocation, word association, synonymy and antonymy" (Pavlenko 2009: 148).

Conceptual representations, on the other hand, are "prototypical scripts that are formed as a result of repeated experiences and involve causal antecedents, appraisals, physiological reactions, consequences, and means of regulation and display" (Pavlenko 2008: 150).

The difficulty in working on emotion words and concepts is that they do not necessarily mean the same thing to different people; even within the same cultural-linguistic group "people vary tremendously in how they differentiate their emotional experiences" (Feldman Barrett 2017: 2). Multilingualism adds an extra layer of complexity. Because semantic and conceptual representations of emotion words and concepts vary across cultures and languages, apparent translation equivalents in two languages can differ in meaning, emotionality and appropriateness of use.

Moreover, semantic and conceptual representations are fluid and are likely to be influenced by other languages in the mind of the multilingual. Pavlenko (2009, 2014) showed that intense exposure to another language and culture can lead to destabilisation in the first language (L1), "seen in the cases where speakers diverge from the L1 pattern in order to accommodate or approximate the divergent pattern of an L2" (Pavlenko 2014: 304). Destabilisation is followed by conceptual restructuring in the L1, as well as "conceptual development" in the second language (L2), defined as "development of new multimodal representations that allows speakers to map new words onto real-world referents similar to native speakers of the target language" (Pavlenko 2009: 141).

In Dewaele (2018a), I have defined "LX" as "any foreign language acquired after the age at which the first language(s) was acquired, that is after the age of 3 years, to any level of proficiency" (Dewaele 2018a: 238). I have argued using the label "LX" and "LX user" is better than "L2" or "non-native speaker" because the label is value neutral and does not refer to the specific chronology of acquisition of the language. Moreover, all LX users are by definition also L1 users, possibly even users of multiple L1s. L1 users are typically highly proficient in the language(s), but it is not inherent in the label. The term LX "has no connotation of inferiority, and it could refer to any number of LXs acquired and forgotten in various ways and to various degrees" (Dewaele 2018a: 238). The level of proficiency of LX users ranges from minimal to maximal and "could very well be equal or superior to that of L1 users in certain domains" (Dewaele 2018a: 238).

The chapter will be organised as follows: firstly, I will briefly look at early research in the field that uncovered differences between the L1 and the LX in the communication and processing of emotions and generated great interest in this area of research. After that I will present two accounts on psycholinguistic reasons why multilinguals perceive and use their languages differently in the context of the communication of emotion. The main focus will then be on recent developments in the field, delving more specifically into individual differences. I am particularly interested why the LXs of some multilinguals feel more embodied and emotional than others in some contexts and how these perceptions may change over time. I will consider studies on overt negative and positive emotional speech of multilinguals, more specifically in swearing and in language choices in intercultural relationships and in therapeutic relationships. I will then focus on inner (emotional) speech before

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delving into research on how multilinguals feel when they use and switch between their different languages. Finally, I will look at a number of studies devoted to emotion recognition in LXs.

2 Early research

In the late 1990s and early 2000s a number of researchers pointed out that emotion and emotion-laden words in bilinguals seemed distinctive from other words in their mental lexicon. Evidence emerged showing that emotion and emotion-laden words are represented, processed and recalled differently from abstract and concrete words (Altarriba 2003; Altarriba, Bauer, and Benveneto 1999). The authors suggested that L1 emotion and emotion-laden words benefit from multiple traces in memory, leading to a stronger semantic representation than L2 emotion and emotion-laden words. Pursuing this line of research, Altarriba and Canary (2004) used the word-priming paradigm to investigate the effect of word arousal, an emotional component of words. They found evidence of affective priming in both English monolinguals and Spanish-English bilinguals. They attributed the bilinguals' longer reaction times and a reduced priming effect in some conditions when compared to monolinguals to the fact that the bilinguals' English words had fewer emotional connotations because of their context of acquisition and environment in which they used English.

Altarriba also investigated conceptual (non-)equivalence in bilinguals' L1 and L2. The Spanish word "cariño", for example, can be translated as a feeling between liking and affection in English (Altarriba 2003). The word overlaps somewhat with each of its English translation equivalents while retaining its own distinct features. Only a subset of elements is shared across Spanish and English. This implies that the words in both languages are not easily interchangeable as they share relatively few features (Altarriba 2003).

Pavlenko distinguished between semantic and conceptual representations of emotion and emotion-laden words in the bilingual mental lexicon (1999, 2005, 2008). She argued that on the lexical level, emotion and emotion-laden words are a separate class of words. She found that crosslinguistic differences exist in bilinguals' emotion concepts and that bilinguals' representations differ from those of monolinguals (2008). She argued that existing speech processing models did not take emotion into account and needed "to incorporate the affective processing dimension, recognizing affective priming effects and differences in emotionality across bilinguals' languages and word types" (Pavlenko 2008: 147). She expanded the scope of emotion research, using multiple data sources, including interviews, film retellings, autobiographical writings of bilingual authors and feedback on questionnaires (Dewaele and Pavlenko 2002; Pavlenko 2002, 2004, 2005, 2006).

Research on autobiographical memories of immigrants showed that emotional valence of autobiographical memories of Russian-English bilinguals varied as a function of the language in which it was retrieved (Marian and Kaushanskaya 2004, 2008). Immigrants expressed more intense affect when the language used at the time of retrieval matched the one used at the time when the event took place.

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One striking finding that emerged from studies based on different epistemological and methodological approaches was that languages that had been acquired early in life (and which were typically the dominant languages) tended to feel more emotional, more authentic, more powerful, while languages acquired later in life tended to feel less emotional, less authentic, more detached, more distant (Dewaele 2004a, 2004b, 2006, 2010, 2011, 2013; Pavlenko 2005, 2012).

3 Language embodiment and emotional context of learning

The traditional view of cognition is that of abstract manipulation of symbols (Zwaan 2014). Recently, a more grounded view of cognition has come to the fore according to which "cognition is grounded in the brain's systems of action, perception, and emotion" (Zwaan 2014: 229). After reviewing existing research on bilingual cognition, Pavlenko (2012) used this new perspective to argue that the main difference in emotionality between L1s and LXs comes from the fact they are "differentially embodied" (Pavlenko 2012: 405). The reason for this difference is of a psycholinguistic nature. The L1(s) feel embodied because of intense affective socialisation in early childhood. Pavlenko describes this as "a process of integration of phonological forms of words and phrases with information from visual, auditory, olfactory, tactile, kinesthetic, and visceral modalities, autobiographical memories, and affect" (Pavlenko 2012: 421). As a result, words are linked to positive or negative memories, while swearwords or taboo words acquire "red flags" denoting prohibition. The multilinguals' early languages thus develop together with autobiographical memory and emotion regulation systems: "the languages thus acquire both affective and autobiographical dimensions" (Pavlenko 2012: 421). This integration of language and affect is less likely to occur in LX acquisition. The main reason is "the decontextualized nature of the language classroom, which does not provide many opportunities for integration of all sensory modalities and verbal conditioning (other than foreign language anxiety) and thus leads to development of 'disembodied' words, used freely by speakers who do not experience their full impact" (Pavlenko 2012: 421).

Pavlenko argued that affective processing is automatic in L1(s) (Pavlenko 2012: 421), while LXs are processed semantically but not affectively (Pavlenko 2012: 405).

Harris et al. (2006) developed "the emotional contexts of learning theory" to account for the heightened emotionality of the L1(s) compared to LX(s). The researchers had adopted a psychophysiological approach, measuring skin conductance response to emotional and taboo words in the L1 and LX of participants (Harris et al. 2003; Harris 2004; Caldwell-Harris and Aycicegi-Dinn 2009) and noticing that L1 words typically elicited stronger responses. The authors argue that the causal factor of language emotionality is the context in which a language was acquired and used. They point out that age of onset of acquisition, often considered to be the crucial variable, only coincides with emotional context of learning and does not have causal power (Harris et al. 2006: 275).

Dewaele et al. (2021) investigated differences in self-reported Emotional Reactions of 271 British English L1 users, 282 Greek and 271 Hungarian English LX users living in their

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home country. English LX users had significantly weaker Emotional Reactions compared to L1 users. Frequency of watching television in English emerged as a strong predictor of Emotional Reactions among LX users. The Emotional Reactions of the Greeks were significantly stronger than those of the Hungarians despite having similar levels of English proficiency. The authors attribute this difference to more intense use and exposure to English in the Greek education system, combined with a tradition of watching English films and television in the original version.

4 Multilingual swearing

Beers Fägersten and Stapleton explain in the introduction of their book *Advances in Swearing Research* (2017) that swearing has long been recognised as a linguistic taboo activity. "Yet swearing remains an intrinsic part of languages and cultures worldwide [...], and constitutes a regular linguistic practice for many people, groups, and communities" (Beers Fägersten and Stapleton 2017: 1). Swearing arouses controversy and indignation around the world, which is why it needs "[r]igorous, scholarly investigation [...] to discover and better understand the historical, psychological, sociological, and linguistic aspects (among others) of swearwords and swearword usage" (Beers Fägersten and Stapleton 2017: 1).

I have pointed out that multilinguals run particular risks in underestimating the emotional of power taboo words in the LX. What sounds like just another LX word and stirs no particular emotion in the LX user might cause serious offense among L1 users (Dewaele 2010, 2013). The Bilingualism and Emotion Questionnaire (BEQ) (Dewaele and Pavlenko 2001–2003), which gathered self-reports from 1,579 adult multilinguals from all over the world, revealed that the L1 was typically preferred for swearing and that L1 swearwords were more emotionally powerful than LX swearwords (Dewaele 2004a, 2004b, 2010, 2011). LXs acquired at school were less likely to be used for swearing later in life (Dewaele 2005). Frequent use of an LX and a higher level of LX socialisation were linked to more frequent use of that LX for swearing.

Dewaele (2010) compared the preference for the L1 or the L2 use for swearing among 386 adult multilinguals extracted from the BEQ who had declared themselves to be maximally proficient in both languages and to use both constantly. The L1 was significantly preferred for swearing and L1 swearwords were considered to be emotionally stronger than L2 swearwords.

The analysis of feedback on swearing from 486 pentalinguals extracted from the BEQ database showed that age of onset of acquisition and context of acquisition had significant effects on the frequency of use of the LX (Dewaele 2013). Early acquisition of the LX and mixed or naturalistic learning of an LX (rather than formal instruction only) were linked to higher use of the LX for swearing. Other predictors included frequent use of the LX, strong socialisation and a wide network of LX interlocutors.

Resnik (2018) used the BEQ to collect data from 167 multilinguals of which two-thirds had German as an L1 and English as an LX, with the remaining participants having Thai or Chinese or Japanese as an L1 and English as an LX. She found that all participants preferred the L1 for swearing. Swearing in the LX was linked to age of onset of acquisition,

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self-perceived proficiency and frequency of use. The emotional weight of swear and taboo words was also found to be higher for the L1 than for the LX. The emotional weight of swear and taboo words in the LX was marginally linked to self-perceived proficiency.

One limitation of the closed items related to swearing in the BEQ was that they were formulated very broadly: "If you swear in general, what language do you typically swear in?" (with a 5-point Likert scale ranging from "never" to "all the time") and "Do swear and taboo words in your different languages have the same emotional weight for you?" (with a 5-point Likert scale ranging from "not strong" to "very strong") (Dewaele 2013: 230). As the aim had been to pick up general trends, these items were valid but we did realise that they could only provide rough averages for estimations of whole languages. The research by Caldwell Harris and colleagues had shown considerable differences in the effects of particular categories of words (neutral, positive, negative, taboo and reprimands) as well as specific words (more or less offensive) in the skin conductance responses from the bilingual participants.

In an attempt to zoom in on variation of the perception of offensiveness and frequency of use of specific words, I established a list of 30 negative emotion-laden words extracted from the British National Corpus (Dewaele 2016a). The aim was to have a wide range in offensiveness, from relatively mild words such as "fruitcake" and "idiot" to really taboo words and expressions such as "fucking hell" and "cunt". The words were integrated in short sentences which figured in an online questionnaire. Participants were invited to fill out Likert scales on their understanding of each item, its offensiveness and its frequency of use. They were also asked how often they swore in English with various types of interlocutors. Independent variables included sociobiographical factors, linguistic profiles and three personality traits: Psychoticism, Extraversion and Neuroticism. A total of 1,159 English L1 users (of which 83 % were multilingual) and 1,165 English LX language users participated in the study (Dewaele 2016a, 2017a). One of the interesting findings was that participants reported that most of their swearing happened with friends, followed by swearing alone, and happened less frequently in interactions with family members, colleagues and strangers. In other words, swearing seemed to be typically part of friendly banter with familiar interlocutors, while aggressive swearing (typically with strangers) was much rarer. English LX users reported swearing significantly less in English than L1 users, which could have been linked to a lack of emotional resonance of the LX or possibly because they had other languages to swear in. High levels of Psychoticism, Extraversion and Neuroticism were linked with more swearing in English among both L1 and LX users. Among the LX users of English, frequency of swearing in English was positively linked to LX proficiency, frequency of use, the use of English outside school when learning the language and a low age of onset of acquisition (Dewaele 2017a).

The analysis of differences between L1 and LX users for the 30 words and expressions yielded some unexpected findings (Dewaele 2016a). As could have been expected, the L1 users reported a better understanding of the words and expressions and more frequent use of the highly offensive ones. However, rather than underestimating offensiveness, LX users significantly overestimated the offensiveness of 29 out of the 30 words and expressions. One interpretation is that LX learners are warned about negative emotion-laden words by their teachers and that they assume they are more offensive than they really are. They may

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attach a "red flag" to them indicating the need for extra care. This makes sense because swearing is a typical "in-group" activity that marks identity and belonging (Dewaele 2013) and since LX users do not belong to that in-group, their swearing in the LX might be perceived as illegitimate. As a result, LX users may underuse taboo words in the LX and therefore not get proper feedback on their situational appropriateness.

The one word that LX users underestimated in terms of offensiveness happened to be the most offensive word in the list, namely "cunt". In Dewaele (2018c) it was argued that the word is so offensive that it is censored in the press and used quite rarely by L1 users, which means that LX users have few opportunities to acquire a complete semantic and conceptual representation of the word. The link between understanding and self-reported use of the word turned out to be very different in L1 users and LX users. L1 users who rated the word as being very offensive reported infrequent use of the word. However, LX users who reported higher levels of offensiveness for the word also claimed more frequent use than those who did not rate the word that highly (with the exception of LX users who had lived in an English-speaking environment). It is likely that LX users who live in English-speaking environments can use the word "cunt" with a certain degree of impunity as LX listeners are less likely to be offended. This, in turn, may lead English LX users into believing that "cunt" is just another swearword, not perceiving the second red flag known to all L1 users. Levels of Extraversion and Neuroticism were not linked with understanding and offensiveness among L1 and LX users, but participants scoring higher on Extraversion and Neuroticism reported using the word more frequently. LX users who scored high on Psychoticism also reported more frequent use of the word.

5 Emotional communication in intercultural relationships

Communicating emotions in an L1 with a fellow L1 user can be difficult because it is easy to say the wrong thing which may cause upset and embarrassment. Unsurprisingly, it is even harder if the interlocutor is a romantic partner who does not share the same L1. Getting it wrong may even jeopardise the relationship. Research shows that LX users can face unexpected pragmatic challenges in emotional communication with their partners.

Dewaele (2008) explored the emotional force of the phrase "I love you" in the different languages of the multilinguals who had filled out the BEQ. Close to half of them felt that the phrase was strongest in their L1, a third felt that it was equal in their L1 and an LX, while a quarter felt it was stronger in their LX. Many participants reported to be aware of semantic and conceptual differences (i.e. the exact meaning of the words and their partial untranslatability) of the phrase in their L1 and LX but explained that even after a long process of LX acculturation they still had not exactly calibrated the power of "I love you" in the LX. Asian participants reported that Westerners rely much more on words to express emotions, while love would be expressed non-verbally rather than verbally in their L1 culture.

Caldwell-Harris, Kronrod, and Yang (2013) confirmed this finding in their study on the use of the Mandarin phrase *Wo ai ni* 'I love you' by 66 Chinese university students and the

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uses of "I love you" by 71 monolingual English American students in the US. The Chinese participants were significantly more reserved in verbal and nonverbal expressions of love than the Americans and preferred nonverbal expressions of love. The phrase "I love you" occurred frequently in Americans families, while "*Wo ai ni*" was used more frequently with romantic partners and friends in China. Interviews revealed that the intentions and reasons for using "*Wo ai ni*" or "I love you" were quite different in both groups. Most Americans but very few Chinese mentioned the inherent importance of saying "I love you". Even the bilingual and bicultural Chinese participants conformed to the Chinese rather than the American pattern, using the English "I love you" very rarely. However, they were not immune from the wide-spread use of "I love you" around them and reported using "*Wo ai ni*" more frequently with family than with romantic partners.

Ozańska-Ponikwia (2019) looked at the emotionality of "I love you" and the equivalent Polish expression *Kocham cię* 'I love you' among 72 Polish-English bilinguals living in the UK and Ireland. She found, as expected, that "*Kocham cię*" was emotionally stronger in the participants' L1, but that a longer stay in England and Ireland, linked with higher self-perceived L2 proficiency and higher frequency of the L2 use, was linked with a stronger perceived emotionality of the English "I love you". The perception of the emotionality of "*Kocham cię*" was unrelated to length of stay in the UK and Ireland.

Pursuing the investigation of love in an LX, Dewaele and Salomidou (2017) investigated whether loving a partner in an LX caused linguistic and psychological challenges. A third of the 429 participants from all over the world claimed not to have experienced any difficulty, while half mentioned lexical and conceptual limitations in the LX which had hampered their communication of emotion. The lack of emotional resonance of the LX early on in the relationship was also mentioned. This left a quarter of participants experiencing a lack of genuineness at the start of the relationship. However, while obstacles did typically arise, 80 % of participants reported that these had faded in a matter of months. Most participants reported that intercultural relationships led to affective socialisation in the LX and the partner's language often became the language of the heart. Female participants expressed more worry about their ability to love a partner in an LX without coming across as fake at the start of the relationship but not later on. Female participants were also significantly more likely to adopt their partner's L1. Variation was also linked to personality traits, with high scorers on Social Initiative and Openmindedness, and – counter-intuitively – lower scores on Flexibility, reporting that their partners' language had become their language of the heart. Moreover, those who scored high on Emotional Stability, Flexibility and Openmindedness did not feel too much loss of emotional intensity in LX communication with their partner.

Finally, Dewaele (2018b) investigated the quantitative and qualitative data collected for Dewaele and Salomidou (2017) further, focusing on the pragmatic challenges of communicating emotions with a partner who did not share an L1. Difficulties in communication, as reported in an open question, were mostly attributed to linguistic and pragmalinguistic issues (40 %) illustrated by the following comment: "I could not communicate my subtle feelings in a sophisticated manner. I felt what I was saying was rather blunt" (Dewaele and Salomidou 2017: 45), followed by sociopragmatic issues (32 %) such as the following comment: "I often use silence as a sign of anger which is completely acceptable and usual

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in my culture but my partner wouldn't get my intention at all. In fact, the silence makes the situation worse" (Dewaele and Salomidou 2017: 46). Participants with higher scores on Emotional Stability, Flexibility and – marginally – Openmindedness, male participants and participants with high levels of education reported fewer difficulties.

6 Emotional communication in therapeutic relationships

The communication difficulties that can arise in intercultural couples can also arise when clients have to communicate in an LX with their therapist (Martinovic and Altarriba 2013; Santiago-Rivera et al. 2009). The main difference between both types of relationship is that the therapist might not know or pay attention to the fact that the client is using an LX. A common assumption in the therapeutic profession is that if the client can make him/herself understood, then there is nothing to worry about. However, as will be discussed in the next section, multilinguals may present different persona in different languages. A psychotherapist unaware of the multilingual and multicultural nature of the client might miss part of the picture, which may lead to incomplete assessments.

Costa and Dewaele (2012) investigated beliefs, attitudes and practices of 101 monolingual and multilingual therapists in their interactions with multilingual patients. Significant differences emerged between both groups, with an advantage for the bi- or multilingual therapists' who used their ability to share a language with the client, or have a facility with languages, to increase attunement with their clients and help them reduce their sense of isolation.

Dewaele and Costa (2013) took the client's perspective in psychotherapy. The analysis of data collected from an international sample of 182 multilingual current or former clients showed that multilingualism was "an important aspect of their sense of self and of their therapy" (Dewaele and Costa 2013: 41). Participants valued being able to express themselves in their language(s) of choice with their therapist, including by code-switching, which they typically initiated. Code-switching in therapy occurred when the emotional tone was raised. The phenomenon of increased code-switching when emotions run high has also been noted in other contexts (Dewaele 2010, 2013; Resnik 2018). Dewaele (2013) speculated that multilinguals who become very emotional may reach a linguistic bottleneck in the LX after which the emotions "spill over" and get verbalised in whatever languages they master. It is possible also that the speaker temporarily loses grip over language choice, which can lead to unplanned code-switching (Dewaele 2013: 215). Clients used code-switching strategically when discussing traumatic episodes, creating proximity or distance, and it allowed them to add depth and nuance to their story. They agreed that the therapist's multilingualism promoted empathy (Dewaele and Costa 2013). These results were also echoed by Martinovic and Altarriba (2013) who concluded that multilingual clients benefit from a therapeutic environment where multilingualism is appreciated, and where code-switching is possible.

Yet, it may take a while before research findings inform practice. A monolingual bias (or at least the assumption that being able to talk about the weather in the LX implies the ability to talk about one's inner self) seems to persist among therapists. Rolland, Dewaele,

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and Costa (2017) analysed responses by 109 multilingual clients and found to their surprise that 93 clients had never discussed their multilingualism with their therapist. This had inhibited their language switching during therapy. Some participants had been more assertive in their language choices, or had benefited from working with a bilingual therapist or somebody who was skilled at creating an inclusive linguistic environment. Only four participants reported two main therapy languages, while 69 participants reported short code-switches which were linked to translation difficulties, expressing emotion, accessing memories or quotation. Over a third of participants used an LX as their main therapy language, with nearly half of this group reporting that they never switched to their L1 in sessions, despite some using it daily for inner speech.

Yet, an intervention study by Bager-Charleson et al. (2017) shows that it is possible to raise awareness about multilingualism among psychotherapists. Combining quantitative data collected via an online questionnaire with 88 therapy trainees and qualified therapists who underwent training on the importance of multilingualism, and interview data from seven volunteers, the authors identified the issues on which the training had had the most and the least impact in quantitative survey responses. The impact of the training was highest with regard to the danger of making assumptions, emotional expression and identity, and lowest for the importance of code-switching. A narrative-thematic analysis of the interview data revealed that therapists had experienced transformative learning related to identity and therapeutic theory. Interestingly, when probed by the interviewer, code-switching emerged as a central theme, "especially with regard to the possibility of addressing, challenging and sometimes combining different emotional memories, cultural and existential concerns" (Bager-Charleson et al. 2017: 1). Costa and Dewaele (2019) and Rolland, Costa, and Dewaele (2021) argued that this type of training is crucial and has a direct impact on mental health practice and the reduction in health inequalities.

7 Language preferences for inner speech

Inner speech is typically about the self (dealing with evaluation, emotions, physical appearance, and relationships) and often about others (family, friends, and intimate partner) (Morin, Uttl, and Hamper 2011). Multilinguals may experience a shift in language for inner speech as a result of migration. Though the change is typically gradual, it can be more abrupt, as Hoffman remembers her acculturation into Canadian culture as a Polish immigrant: "I wait for spontaneous flow of inner language which used to be my night-time talk with myself … Nothing comes. Polish, in a short time, has atrophied, shrivelled from sheer uselessness. Its words don't apply to my new experiences, they're not coeval with any of the objects, or faces, or the very air breath in the daytime" (Hoffman 1989: 107).

In another study, Dewaele (2015) compared the language preferences of 1,454 adult multilinguals (from the BEQ) for inner speech and for emotional inner speech in their different languages. LXs were found to be lower in preference for emotional inner speech than for general inner speech. The same independent variables that were found to affect language choices for overt speech affected the choice of the LX for inner speech. More frequent use of various LXs for inner speech and emotional inner speech was positively linked to

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self-perceived proficiency in the LX, general use and socialisation in the LX. Age of onset of acquisition and context of acquisition of the LX, perceived emotionality of the L1 and LX were also linked to frequency of inner speech and emotional inner speech. Increased use of an LX for inner emotional speech was interpreted as a sign of conceptual restructuring and of increasing LX embodiment. This showed that an LX can evolve from being a mere echo of social interactions to become increasingly internalised to the point of becoming a multilingual's ''language of the heart''. The L1 can go through a reverse process, where it ceases to be the (only) language of the heart for those who use the L1 infrequently, who start attriting in it and for whom the emotionality of the L1 fades.

Hammer (2017a) developed this argument using items from the BEQ to analyse the effect of acculturation on language preferences for different language functions (communicative function, cognitive function and inner speech). She looked at 149 adult university-educated sequential Polish-English bilinguals who had immigrated to the UK as young adults and were fluent in English. Combining questionnaire data and interviews with 17 participants, she found that English L2 use was highest for communicative functions, followed by cognitive functions and finally with inner speech. Higher levels of acculturation and an intention to remain in the UK were linked to significantly more frequent use of English L2 for the various functions and for inner speech (confirmed in Hammer 2017b). However, even highly acculturated participants continued to use Polish for inner speech.

In a related study on the same database, Hammer (2019) focused specifically on individual differences in the language choices for different types of inner speech of the same Polish participants in the UK. Results show that more highly acculturated participants who operated in majority L2-speaking social networks, and intended to remain in the UK indefinitely, used significantly more L2 for thinking about L2 events, for keeping a diary, for praying and for thinking about events that had happened in the L1. Participants with lower levels of L2 acculturation used the L2 at a comparable level across the three domains of inner speech, and did not use the L2 more frequently in the domain of diary writing. Hammer (2019) concludes that the adoption of L2 in inner speech is a clear indication of ongoing processes of cognitive restructuring in acculturated bilinguals.

Finally, Leung and Dewaele (2021) looked at language preferences for inner speech among 425 multilingual Chinese university students in the UK. English inner speech was found to develop gradually in the academic domain and in the general domain. Frequency of use was linked to higher level of LX socialisation, a higher level of sociocultural adaptation, and having had previous immersion.

8 Feelings of identity and belonging

Since language is inextricably linked with identity and group membership, it is inevitable that multilinguals may feel different when switching language. Early research showed that bilinguals can feel they have "multiple selves" (Wierzbicka 1997, 2004). Koven (1998, 2007) reflected on the surprising finding that two French-Portuguese bilinguals told the same story about personal experiences quite differently in both languages. They seemed to per-

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form two distinct cultural selves using a variety of interlocutory tendencies, communicative strategies, discursive forms and styles.

Pavlenko (2006) coded the feedback to an open item in the BEQ related to feelings of difference when switching languages and found that 65 % of the 1,039 participants did indeed feel different, while 26 % did not feel different at all. She aimed to uncover the sources of these self-perceptions. She found that the perception of different selves was not restricted to late or immigrant bilinguals, "but is a more general part of bi- and multilingual experience" (Pavlenko 2006: 27). Her analysis of the feedback showed that similar experiences (switching being linked to a change in verbal and non-verbal behaviours) were interpreted differently by participants drawing on different discourses of multilingualism and self (Pavlenko 2006: 27). She concluded that most multilinguals sense a shift in personality and that "[s]ome may derive enjoyment from hybridity and relativity of their existence and others may feel that they inhabit distinct and at times incommensurable lifeworlds and experience pain and anguish over this condition" (Pavlenko 2006: 29).

In a further study on the feedback of 1,005 multilinguals from the BEQ, Dewaele (2016b) established that feelings of differences were unrelated to age of onset of acquisition, and despite the fact that several participants attributed feelings of difference to limited proficiency or frequency of use of the LX, no statistically significant relationship backed this up. The only sociobiographical variables to be linked to feeling different were higher levels of education and older age. Feeling of difference were also positively correlated with anxiety in speaking the L2 and L3. Participants presented varied and unique explanations for their feelings of difference, linking them to conscious or unconscious shifts in behaviour and to unique contexts of language use. Several participants also reported these feelings of difference to change over time.

The importance of context on feelings of difference was highlighted in Dewaele and Nakano's (2013) study on perceived shifts on five scales of feelings (feeling logical, serious, emotional, fake and different) among 106 adult multilinguals when using their L1, L2, L3 and L4. Many participants who reported feeling different when switching linked it to a change in the context (environment, interlocutors) in which they use their languages. It was argued that the contextual and situational changes could cause the difference in feeling, rather than the language switch itself. Indeed, participants belonging to a community of regular code-switchers reported switching languages within the same context and not feeling any different (Dewaele and Nakano 2013). Participants also reported feeling more logical, more serious, more emotional and less fake in their L1 and gradually less so when using languages learnt later in life.

In another study, Resnik (2018) reported that feelings of difference among 167 multilinguals are stronger if the cross-cultural and linguistic differences between the L1 and the LX are greater. A total of 70 % of her 61 Asian participants agreed that they felt different in English compared to only 56 % of her 106 German participants.

Are some personality types more prone to feeling different when switching language? This was a question Wilson (2013) pursued using questionnaire data from 172 adult sequential English-French bilinguals. She found that speaking French L2 gave many participants a sense of freedom and enabled them to express themselves and act in new ways. Introverts were more likely to feel different when using French, as if the L2 gave them "a mask to hide behind even at fairly modest levels of proficiency" (Wilson 2013: 8).

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Over the years, many studies have provided perspective to the question. For example, Ozańska-Ponikwia (2012, 2013) investigated the same question among 102 Polish-English bilinguals who had been living in the UK or Ireland for some time. Feelings of difference when switching language were positively linked to Extraversion, Agreeableness and Openness as well as a number of lower-order traits linked to Emotional Intelligence, such as Emotion expression, Empathy, Social awareness, Emotion perception, Emotion management, Emotionality and Sociability. Ozańska-Ponikwia argued that all bilinguals feel different when switching languages but that not everybody notices and reports the subtle changes.

Panicacci and Dewaele (2017) contributed an answer to the question by collecting data from 468 Italian migrants living in English-speaking countries using BEQ items. Statistical analysis revealed that lower levels of Social Initiative and Emotional Stability were related to an increased feeling of alienation when speaking English LX. Some more introverted participants reported difficulties in voicing their emotions in the LX and suffering from a lack of authenticity when using the language. Many participants felt that the detachment they experienced when using the LX affected their feelings. The degree of attachment with the heritage or host culture was also related to feelings of difference: a strong attachment to the host culture corresponded with weaker feelings of change. Cultural attachment was also related to personality traits: those with strong attachment to their heritage culture were less flexible and less emotionally stable, whereas those with a stronger attachment to the host culture scored higher on Cultural Empathy and Openmindedness.

Recently, Mijatović and Tytus (2019) investigated the effects of biculturalism and personality traits on feelings of difference among 88 German-English bilinguals. While no significant difference emerged between the monocultural and the bicultural group, participants who scored high on Agreeableness were more likely to agree to experiencing a feeling of a changed self in the L2. A qualitative analysis suggested that no single cause exists for feelings of difference, but that participants felt they were linked to cultural differences, language proficiency, "breaking free" from the L1 personality, and changes in personality due to reactions of interlocutors.

In a follow-up study, Panicacci and Dewaele (2018) used their database of the Italian migrants to investigate the effect of interlocutor and topic of conversation on feelings of difference when switching languages. Participants felt significantly different when speaking English LX with less familiar interlocutors. During the interviews, they explained that conversations with strangers heightened their LX anxiety and lowered their confidence. Also, because their use of English was reserved for interactions with strangers, work colleagues and acquaintances, they failed to develop a higher emotional attachment to English, resulting in a sense of alienation and detachment. The topic of conversation also emerged as having a significant effect on feelings of difference. While discussing neutral topics in English LX did not cause a feeling of difference, more personal topics and especially more emotional topics discussed in English triggered feelings of difference. Many participants reported that Italian L1 was their language of the heart, and that English felt disembodied and emotionally constraining and led them to fear that they were projecting a distorted image of themselves to their interlocutors. The results were interpreted with reference to Grosjean's (2010, 2015) Complementarity Principle, which states that bilinguals

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usually acquire and use their languages for different purposes, in different domains of life, with different people and that different aspects of life often require different languages. Having to use the LX where the L1 would have been preferred caused a mismatch, which triggered unpleasant feelings of difference. Revisiting her dataset, Panicacci (2021) concluded that how migrants engage emotionally with their heritage and host culture is linked to a constantly evolving network of linguistic, cultural and psychological variables that may vary in private and public places.

The reduced emotional resonance of the LX can also be an advantage. Cook and Dewaele (2022) used an interpretive phenomenological approach to investigate the language experiences of three refugees in a therapeutic community in London. The participants had been tortured in their homeland because of their sexual orientation. They said that the use of LX English enabled them to visit their pain in therapy sessions. It was also a tool to create a new, more confident self and it allowed them to distance themselves from the anguish and shame embodied in their L1.

Finally, Hammer (2016) used her database of Polish-English bilinguals to investigate feelings of difference, or rather the opposite, namely the perception of "being yourself". She found that a higher level of sociocultural and psychological integration in the UK corresponded with a stronger sense that it was possible to "be yourself" in English L2. She also linked the findings to Grosjean's (2015) Complementarity Principle, as stronger L2 acculturation implies an increased number of domains in which English is used. Her participants also reported that their languages had become associated with stages of their life, and hence that Polish L1 was more strongly connected with the younger, inexperienced selves, whereas English L2 was associated with their more mature, experienced selves.

9 Recognising emotion

Burns and Beier (1973) argued that the communication of emotions happens via three different channels: (i) The verbal channel conveys information relating to the lexical content of language; (ii) the vocal channel refers to pitch, rhythm, timbre, speaking rate, or intensity; (iii) while the visual channel is related to facial expression, gesture and body language. The cues conveyed by these channels have to be identified, sorted out depending on their relevance for the interpretation of the utterance, and interpreted accurately according to the context. The extraction and interpretation of emotional information from three simultaneous channels might require extra effort in an LX. Once the emotional information has been identified, people need to evaluate the degree to which the cues received via the different channels are relevant. This might be different in their L1 culture and LX culture. Furthermore, language/culture might also moderate the interpretation of the emotional cues.

In a pioneering study into LX users' (verbal-vocal) Emotion Recognition Ability (ERA), Rintell (1984) compared a control group of 19 L1 English users to 127 LX learners of English in the US with either Arabic, Chinese, or Spanish as L1. Participants had to identify the emotional state of one of the interlocutors in 11 recordings of English conversations includ-

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ing various emotions. The results revealed no effect for age nor for gender, but a main effect was found for language status, with L1 users outperforming LX users. Moreover, the strongest effect was found for LX proficiency. The more proficient LX users had less difficulty in identifying the emotions in the stimuli than their less proficient peers. Not only LX users' proficiency in English, but also their L1 appeared to have an effect on the results, with the Chinese speakers scoring significantly lower on ERA than the Arabic and Spanish speakers. The author interpreted this finding as an effect of cultural distance between the L1 and the LX.

About two decades later, Graham, Hamblin, and Feldstein (2001) conducted a study comparable to Rintell's (1984), but with slightly different stimuli: one monologue was recorded several times by several actors, each time with a different emotion conveyed by the vocal channel. The control group consisted of 85 American-English L1 speakers who were compared with 45 Japanese and 38 Spanish LX users of English in their ability to recognise the emotions conveyed in the stimuli. Just as in Rintell's (1984) study, L1 users turned out to be better at recognising the emotions accurately compared to LX users. The overall recognition rate was 59 %, whereas the average recognition rate was 42 % for the Spanish-speaking LX users and 38 % for the Japanese-speaking LX users. Moreover, the confusion patterns of the Spanish-speaking LX users were more similar to those of the control group than those of the Japanese-speaking LX users, which seems to reveal a cultural distance effect. However, the difference in Japanese and Spanish LX users' ERA scores was not statistically significant – while it was in Rintell's (1984) study. Another difference with Rintell's (1984) findings is that Graham and colleagues (2001) did not find any effect of proficiency. The authors hypothesised that vocal ERA in an LX is only acquired after extensive exposure to the LX or if special attention is paid to vocal emotion recognition in the language classroom.

In another study, Zhu (2013), who looked at the perceptual ability of recognising positive emotional prosody of 20 L1 users of Mandarin, 20 L1 users of Dutch and 20 advanced Dutch learners of Chinese, found that the latter outperformed L1 users of Chinese in their ability to recognise emotions via vocal (prosodic) cues, although her LX participants had not received extensive exposure to Chinese in a naturalistic context.

Lorette and Dewaele (2015) considered a combination of visual, vocal and verbal channels for emotion recognition. The authors focused on individual differences in the ERA of 920 L1 and LX users of English. Participants were shown in an online survey six short English videos and were asked to identify the emotion portrayed by the L1 English-speaking actress. Both L1 and LX users of English recognised an average of four emotions, despite the latter scoring significantly lower on a lexical decision task, which was used as an indicator of English proficiency. Linguistic proficiency turned out to be significantly positively related to ERA among the LX users, and marginally so among the L1 users. Asian LX users scored significantly lower on emotion recognition than European LX users, despite the fact that they had similar linguistic proficiency scores. The authors concluded that cultural distance from the target language and linguistic proficiency in that language both affect ERA. Further research on the same corpus revealed that English LX users performed significantly worse than L1 users when they only heard the stimuli (i.e. without visual input) (Lorette and Dewaele 2020).

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10 Conclusion

I started the chapter with the image of my baby daughter Livia pointing furiously at the cupboard where her beloved biscuits were stored, and later being able to refer to the biscuits in French, Dutch and English, infusing the magical words with emotional power. My point was that these words acquired emotional resonance and powerful connotations that her Spanish word "galleta" never matched. My guess is that words acquired early can still send a shiver down your spine or make you salivate. They are fully embodied and may even harbour long forgotten memories like the famous plump little cakes called "petites madeleines" that the narrator of Proust's *A la recherche du temps perdu* dipped in tea, thus triggering powerful multisensory memories of his childhood. Because L1(s) are acquired in early childhood, implicitly and with full assistance of emotional memory, they acquire a special status. Multilinguals generally feel that LXs that they learnt later, explicitly, through formal instruction, remain imperfect tools to communicate emotions. They need a lot of time to explore the meanings of emotion words and the sociopragmatic rules that govern their use. The calibration of emotion words and emotion-laden words happens over prolonged exposure. Multilinguals face both cultural and pragmatic challenges. They have to learn what can be said and what needs to remain unsaid. The larger the linguistic and cultural distance between the L1 and the LX, the more focus will be required on the verbal, vocal and visual channels through which emotions are communicated. Inevitably, when using these linguistically and emotionally weaker languages, multilinguals may not feel their "usual selves". That said, the LXs of multilinguals who have been through a process of intensive acculturation and affective socialisation in the LX may feel that the LX has actually surpassed the L1(s), that it has become their language of the heart, which is why "the emotional preponderance of the L1 does not reflect a law of nature, but is rather a reflection of the probability that multilinguals often remain dominant in their L1" (Dewaele 2013: 217). Harris et al. (2006) are probably right that age of onset of acquisition is not the (main) causal factor but rather a co-variant of context of acquisition. Indeed, it is typically less likely for a sequential multilingual to get as much wide-ranging emotional input in an LX as in an L1.

Another point that can be drawn from the studies is that embodiment spreads unevenly across domains of the LX. In other words, speaking about emotionality about the "whole" L1 or LX might be a slightly artificial statement. Longer acculturation means that the LX might become dominant in an increasing number of domains of life of the multilingual, including those where emotional communication is bound to happen. The L1 might be in retreat and may be reserved for (emotional) communication with fewer interlocutors, such as a partner or close family members, or oneself. The LX might still seep in that environment through code-switching and might even lead to a gradual abandonment of the L1 in favour of the LX. Feelings of difference would then occur when the L1 was used instead of the usual LX.

Future research on multilingualism and emotion would benefit from more interdisciplinary studies combining etic and emic perspectives and using a wider range of methodologies in order to obtain triangulation of phenomena that have been uncovered using a single method. It would be great to see self-reports and interviews combined with measures

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of brain activity for example. The field would also benefit from experimental designs with greater ecological validity. In other words, researchers could use messy multimodal stimuli to see how L1 and LX users would react differently in everyday situations.

To conclude, multilinguals experience both long-term change and short-term fluctuations in language embodiment which affect their language preferences for the communication of emotions and their sense of self.

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Allison M. Wilck and Jeanette Altarriba

59 Emotion words in monolingual and bilingual cognitive psycholinguistic research

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3 Representing emotion in bilingual speakers
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Abstract: For decades, the emotional lexicon has continued to be a subject of interest among psycholinguistic researchers. More recently, this interest has expanded to the ways in which emotion words are cognitively processed in both single and dual language learners. The current chapter will examine research regarding emotional language processing both within and between monolingual and bilingual speakers. These differences in how a language is interacted with can influence not only experimental designs within the research realm, but also interpersonal interactions on an individual level. Theoretical and experimental background for the distinction between emotion, concrete, abstract, and emotion-laden words is provided to examine the uniqueness of emotion language research and processing. In addition, this review gives an overview of basic theory, research methodologies, and findings of the relevant research. This information is applied to our current understanding of the acquisition, storage, and retrieval of emotion words in both monolingual and bilingual speakers, with a discussion on learning emotional stimuli in a new language. Consideration for practical applications of research on the representation of emotion in language, including clinical and counseling practices, the justice system, and decision-making, is provided along with suggestions for future research directions.

1 Introduction

Humans are highly social and communicative beings. As such, we rely on symbols and language to express ourselves and describe our environment. An important aspect to learning the human language is the acquisition of emotional verbal expressions that are stored in the emotional lexicon (e.g., Altarriba and Bauer 2004; Bock and Klinger 1986; Martin and Altarriba 2017). In fact, the emotional lexicon has been a subject of interest among psycholinguistic researchers for decades. This ever-growing literature on emotional language processing focuses not only on individuals with knowledge of a single language

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(monolinguals), but also on those communicating information across and within two or more languages (bilinguals). Furthermore, understanding how emotion words are uniquely processed within monolinguals and bilinguals, as compared to other various word types, can have important applications within the real world in both professional and personal settings.

In order to evaluate the implications that emotion word processing can have on monolingual and bilingual speakers, it is necessary to understand how this word type differs from other word categories. Emotion words can be directly experienced and can coherently complete a sentence such as "I feel _____", or "He/She feels _____" (see Pavlenko [2007] for a discussion on what constitutes an emotion word in multilinguals). These emotion words, such as "happy" and "furious", are used to describe an affective state and contain both a *valence* and an *arousal* component. Valence defines the level and direction of "pleasantness" associated with a given word, ranging from low to high, whereas arousal depicts the intensity of excitement or energy associated with it. For example, "ecstatic" is a positive emotion word scoring high in valence and high in arousal, conveying a strong positive emotional state. Negative emotion words, such as "gloomy", are low valence but typically high in arousal.

As with all words in the mental lexicon, the ability to understand emotion words involves a learning component that develops over time. In a cross-sectional developmental study of emotion word comprehension, Baron-Cohen et al. (2010) examined word comprehension from childhood to adolescence. Their survey's results indicated that the size of the emotional lexicon continues to grow throughout childhood, doubling in size every two years from ages four to eleven. They also found that comprehension of emotion words involving more abstract and metaphorical ideas (e.g., disbelieving, touched, romantic) was delayed and often incomplete, even in the oldest age groups assessed. The authors concluded that the emotional lexicon develops on a gradient throughout adolescence and requires the attainment of developmentally appropriate cognitive skills to reach proficiency. Nonetheless, items in the emotional lexicon tend to be more readily available for recall than other types of abstract words (Altarriba and Bauer 2004; Kousta et al. 2011). It appears that engaging in the affective component of language strengthens the link between semantic meaning and memory for the emotion words.

Notably, the human mind is tuned towards processing emotion words in a way that is distinct from that of other word types. To investigate how various word types are processed, Altarriba and Bauer (2004) asked participants to view a series of concrete, abstract, and emotion words and to rate them on a 7-point scale for concreteness, imageability, and context availability. Concreteness refers to the realness or tangibility of a word. Words such as "computer" and "book" denote objects that exist in the physical world and are therefore high in concreteness. Imageability denotes the ease with which a mental image is conjured up in reference to a given word. For example, when thinking of the word "party", images of balloons, smiling faces, and cake are readily brought to mind. Context availability describes the extent to which a word evokes a particular circumstance during recall. For example, the word "bed" is easily associated with the context of sleeping and is therefore high in context availability.

Separate from emotion words, concrete words include nouns that are tangible objects (e.g., car, chair, bird) and, as suggested by the results of Altarriba and Bauer (2004), are

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rated high in concreteness, high in imageability, and high in context availability. Additionally, abstract words that include ideas and theoretical concepts, such as "liberty", "freedom", and "intelligence", were rated as low in concreteness, low in imageability, and low in context availability. Activating different properties than abstract or concrete words, emotion words, such as "confused" and "joyful", portray an affective state and were rated low in concreteness, low in imageability, and somewhat high in context availability (although not as highly rated as concrete items). When it comes to memory, Altarriba and Bauer demonstrated that emotion words are better recalled than both concrete and abstract words, providing evidence that indicated these three-word categories moderate the effects of word priming to various degrees, further signifying a distinction between the word types.

The uniqueness of emotion words in the mental lexicon, as compared to other word types, is also depicted in processing time. Data from a recent large-scale lexical decision study of emotion words demonstrated the relatively faster processing of both positive and negative emotion words as compared to neutral words (Vinson, Ponari, and Vigliocco 2014). In this study, participants viewed a series of stimuli in which half were real words (e.g., honk) and half nonwords (e.g., vonk). For each stimulus, a word/nonword decision was made as quickly and as accurately as possible. The data from this study suggest that this emotion processing advantage occurs categorically: words with strong valence levels are processed faster than neutral words. This occurs regardless of arousal level. It appears that the human mind processes the overall emotional content of a word in a unique fashion, as compared to neutral words. Thus, it is evident that words with an affective component are treated differently than other word types and exist as a separate, distinct word category.

Whereas emotion words describe a mental state with an affective component, emotion-laden words (e.g., funeral, puppy, dream) differ in that they elicit an emotion rather than describe an emotional state. The differences between emotion and emotion-laden words are not only definitional, but also found in cognitive processing. Emotion-laden words are those that conjure up an emotional reaction as a result of the word's connotation. For example, "shark" elicits the emotion of fear although the word itself does not describe an affective state. Kazanas and Altarriba (2015) utilized a lexical decision task to demonstrate semantic priming differences between emotion and emotion-laden word pairs during reading. Participants were shown a word prime (i.e., a word seemingly unrelated to the task with the intention of engaging a specific concept, such as a positive or negative emotion), followed by a target (i.e., the stimulus of interest) consisting of either a real word or a pseudoword. They were then asked to decide if the target is a word or nonword as quickly and as accurately as possible. The word pairs (i.e., those consisting of a real word prime and target) were positively or negatively valenced, and either emotion or emotion-laden words (e.g., delight-joy or coffin-burial). The results demonstrated not only shorter reaction times to positive over negative words, but also faster processing and greater priming effects for emotion over emotion-laden word targets. Other studies have found similar results, quantifying the magnitude of this priming effect to be twice as large for emotion words as compared to emotion-laden words (e.g., Altarriba and Basnight-Brown 2010).

Overall, the cognitive processing of emotion words differs from that of concrete, abstract, and emotion-laden words. The next section of this chapter will discuss how the

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emotional lexicon is represented and processed in both single language speakers and dual language speakers. A comparison of the affective component of language in bilinguals across their spoken languages will be provided, as well as important considerations regarding language acquisition. In addition, real-world implementations for research on the bilingual emotional lexicon are included.

2 Emotion word processing in monolinguals

Over the years, many theories have been proposed to explain how the human mind functions, including during language processing. A leading theory of memory known as the semantic network model or spreading activation model (Collins and Loftus 1975) proposes that all concepts from every domain are held in the mind as individual units called nodes (see Figure 59.1). These nodes are connected to one another by varying degrees based on semantic relatedness. When a node is activated (i.e., a specific concept is being considered), additional nodes that have any degree of meaningful connection to that concept become activated as well. However, this activation dampens as it spreads further and further away from the initial input node. In accordance with the spreading activation model, thinking of affective terms facilitates the ease with which other highly associated emotional target words can be processed. This occurs regardless of the valence or the arousal level of the associated word. Connection through affect between two given concepts can provide valuable information about the stimulus in question, whether it is considered to be approachable and pleasing, or avoidable and unpleasant (see Elliot and Covington [2001] for a review of approach-avoidance motivation). Hence, evoking the concept of emotion facilitates the accessibility of similar words.

Although the literature has begun to address the important distinction of word type on cognitive processing, there remains a gap in the understanding of what factors influence the ability to store and report emotion words. Contemporary studies (e.g., Estes and Adelman 2008; Kazanas and Altarriba 2016) have suggested an influence of valence (the pleasantness of a word) on the ability to process language. Using a modified attentional dot

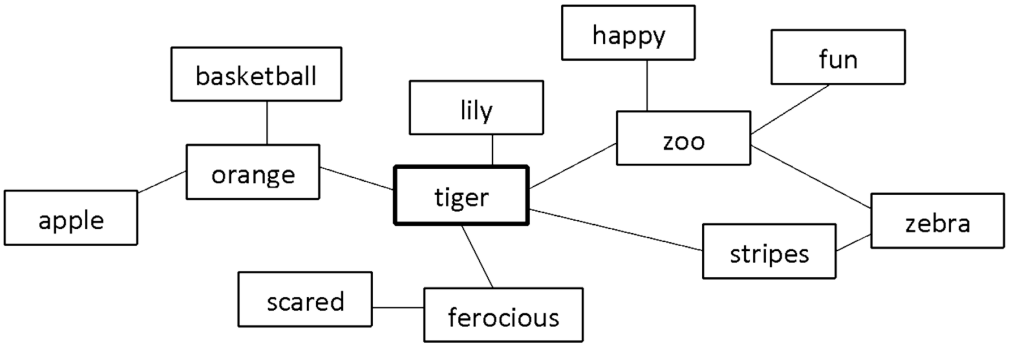

Fig. 59.1: An example of the semantic network model or spreading activation model for the word "tiger" (Collins and Loftus 1975).

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probe paradigm, Sutton and Altarriba (2011) were the first to examine processing differences between positively and negatively valenced emotion words in a non-clinical population. Participants viewed an emotional and a neutral word presented simultaneously in separate areas on a computer screen. Immediately following the termination of the words, a probe (the letter R or P) appeared on the screen in the same spatial location of either word. The reaction time and accuracy for participants to identify the probe was recorded. Participants consistently responded faster to the probe when it appeared in the same location as negative emotion words than in the location of neutral words. However, positive emotion words did not produce this same facilitation effect; the presence of a positive emotion word did not influence reaction time for neutral probes. Even when presented briefly, the negativity of a word holds attention to allow for faster processing of the probe when it is presented in the same location. Negative valence seems to influence attention by increasing the difficulty in ability to shift away from the emotional stimulus and thus dominate attentional resources.

Support for the emotional processing advantage in words has also been established with eye-tracking technology. This methodology uses an eye-tracker apparatus connected to a computer to record the position of the eye. Data from this technology can provide both spatial and temporal information about eye movements and fixations, or resting locations. From there, attention-capturing features and areas of interest can be determined by how quickly the eye moves and where its gaze falls.

A recent study (Knickerbocker, Johnson, and Altarriba 2015) found that readers were quicker to process sentences containing either a positively or negatively valenced emotion word (e.g., happy, distressed) than a neutral word (e.g., chair). When reading, emotion words elicited automatic attention such that participants made faster first fixations and spent more time on the post-target region than they did for non-emotion words. Furthermore, this emotion processing advantage was enhanced for readers who were experiencing high levels of anxiety during testing. The time it took to process negative emotion words was reduced for these participants. From these findings, it is clear that valence has a robust effect on the cognitive processing of emotion words. These results support a theory of automatic processing of emotion words as well as the importance for the consideration of valence in lexical research.

As discussed, there is evidence to support an emotionally enhanced memory through attention, particularly for high arousal words of negative valence. To address the mechanisms underlying this cognitive bias towards negative emotion words, Nadarevic (2017) assessed the storage and recall abilities of German undergraduate students using recognition (identifying a stimulus through recollection of a specific memory or general familiarity) and recall (generating a response from memory) tests in a within-subjects experiment. Negatively valenced German nouns of high and low arousal levels were paired with a fabricated nonword sharing the same letter count and initial two letters (e.g., *biest* 'beast' – *bimar*). After studying the pseudoword-word pairs, participants completed a recognition test in which they were asked to indicate if the presented word was new or from the previously studied word list. Finally, a cued-recall test was administered in which the previously studied nonwords were presented and participants were prompted to remember and type the corresponding word from the studied list. In a cued-recall test, responses are based on recollection for the target word that was previously presented in conjunction with the cue.

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Statistical analyses of the results indicated significantly higher performance from individuals during the recognition task when assessing neutral words than negatively valenced words (e.g., better recognition for *eimer* 'bucket' than *leiche* 'corpse'). This finding indicated a *recognition advantage* for neutral words as compared to negatively valenced words. However, a clear *retrieval advantage* for negatively arousing words during the cued-recall test was found (e.g., better recall for *waffe* 'weapon' than *pappe* 'cardboard'). In this test of memory retrieval, the proportion of correctly recalled words was significantly higher for negatively arousing words than for neutral words. Although there was no evidence for a differentiation in memory storage, this study supports the notion that negative emotion words have a clear memory recall advantage over neutral words.

Why is attention captured by negative valence? Attention towards emotional stimuli appears to be automatic, and thus the processing of emotion words is automatically occurring. From an evolutionary perspective, it is advantageous for organisms to approach pleasant stimuli and avoid potential harm (e.g., Davidson et al. 1990). In this sense, the ability to quickly identify the valence of a stimulus is advantageous for survival. The attunement towards potentially threatening stimuli, as expressed through the heightened attention towards negative affective words, is directly influenced by the degree of negativity in the emotion word. Individuals are most accurate at identifying words with strong emotional components, and quickest at recognizing negatively valenced words (e.g., Kuperman et al. 2014). However, some studies have found a longer response duration for negatively valenced words (e.g., Kazanas and Altarriba 2015). Although this may seem to be a contradictory finding, the underlying survival explanation accounts for this pattern of results. Emotionality, in a general sense, captures attention as a means to extract valuable information to approach or withdraw from a stimulus. In the case of negative emotion words, the decision to respond to the aversive stimuli may require additional attention to better process the presented information. When in a non-threatening experimental environment, the processing of the negative emotion words may take longer to disengage from in response to the natural inclination to extract and process potential threats.

In summary, the main findings reported in the current section indicate that monolinguals are selectively attuned to processing emotion words. Various methodologies, including eye-tracking, show that attention is captured by emotional concepts. Specifically, items with a negative valence are quickest to be identified and take longer to disengage from. This attunement towards negative stimuli results in a greater ability to recall these types of items, as compared to neutral stimuli. The next section will discuss how emotion words are represented in dual language speakers.

3 Representing emotion in bilingual speakers

Most research on emotion word processing has been conducted using monolingual participants, more specifically, English speakers. However, a growing interest in the emotional lexicon of bilinguals has revealed many avenues of exploration. In particular, to what extent does the affective component of linguistics remain constant or vary across an individual's primary childhood language (L1) and an acquired secondary language (L2)?

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In today's society, individuals who are able to speak in more than one language are typically revered as having an advantageous skill. People are frequently traveling and migrating to new countries for pleasure or work, engaging in international trade, and accessing information about foreign cultures on the internet. Bilingualism allows for better integration and connection into multiple cultures in our ever-diversifying world through more efficient communication. However, this ability to truly achieve a fluid understanding of an L2 can be met with obstacles. The upcoming section will provide a discussion on the important emotion-processing differences between an L1 and an L2, and how this discrepancy can result in weakened affection in an L2.

3.1 L1 versus L2 emotion words

Most studies regarding the ability to process emotion words in bilinguals have directly asked participants to consider the affective component of the presented words. This method allows for the assessment of the linguistic emotional element between the processing of an L1 and an L2. Unlike in monolingual research, recent experimentation has indicated that the distinction between emotion and emotion-laden words in an L2 is less uniform. Kazanas and Altarriba (2016) assessed the automatic processing of these emotional word types within a single bilingual population. All participants indicated Spanish as their L1 and English as their L2, with the Spanish language having an earlier age of both spoken and reading acquisition. Following statistical analysis, the authors determined that the emotion processing advantage for emotion words over emotion-laden words is limited to the English language in Spanish-English bilinguals. Participants primed with emotion words were faster to respond to emotion targets than to emotion-laden primes and targets, but only in the English condition. No emotion processing advantage was found in the Spanish condition. It is critical to note that for this study, as is the case for much of the current bilingual literature, bilingual participants were residing at an English-dominant university. In fact, at the time of the study, participants indicated using English more than Spanish on a daily basis. Therefore, Kazanas and Altarriba (2016) argued that it is likely the participants switched their dominant language to English. In other words, even though Spanish was considered their original L1, English is the dominant language and it is processed as an L1. The authors interpret this finding as evidence for the strength of the emotion/emotion-laden distinction to be evident only in a bilingual's dominant language.

As in monolinguals, the emotion processing advantage is robustly found in bilinguals, as well. When compared to concrete and abstract words, the presence of an emotional component of a word results in shorter processing time within both languages, as demonstrated by faster reaction times, across a variety of tasks and methodologies (e.g., word priming in Conrad, Recio, and Jacobs [2011] and in Kazanas and Altarriba [2016]; neurological activity in Opitz and Degner [2012]).

As used in studies of monolingual populations, the lexical decision task has been employed with bilingual participants to assess the automatic processing of affect without explicitly requiring participants to attend to the emotional meaning of the target words. To explore the potential word processing differences between an L1 and an L2, Ponari et al.

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(2015) compared early and late L2 learners of English to native L1 speakers. The amount of time it took participants to evaluate positive, negative, and neutrally-valenced emotion words was recorded. To fully assess for processing differences between L1 and L2, the researchers tested and controlled for the bilingual participants' L1 degree of similarity to the English language, such that participants with L1s from various language families, including non-Latin-script and sign language, were included. The results of this study demonstrated the same valence processing effect found in monolinguals – positive and negative emotion words produced a faster reaction time than neutral words. Importantly, this valence advantage was found in both early and late L2 learners, regardless of the frequency of L2 use in daily life. Comparable results of the valence advantage for both L1 and L2 emotion words have also been found for emotion word recall tests (Ferré et al. 2010) as well as with enhanced brain activity for valenced words (Opitz and Degner 2012). Whether or not participants are engaging in L1 or L2, emotion words capture attention and are automatically processed.

Whereas emotionally charged words are more readily processed than neutral words within a language, L2 learners tend to produce overall slower reaction times to emotion word identification in L2 as compared to their L1 (e.g., Altarriba and Basnight-Brown 2010; Basnight-Brown and Altarriba 2016; Opitz and Degner 2012; Ponari et al. 2015). In other words, although emotion concepts draw attention in both an L1 and an L2, the comprehension of emotion words occurs faster when presented in an L1 as compared to its L2 equivalent.

Opitz and Degner (2012) recorded reaction time and event-related potentials (ERPs) of bilinguals to investigate the early time course of emotional word processing across L1 and L2. An ERP is a measure of brain responsivity to a sensation or cognition. The voltage amplitudes are recorded following the presentation of a stimulus, with higher peaks indicative of greater electrophysiological responses. A total of 32 French-German and German-French bilinguals who started learning their respective L2 before age 17, and who were self-rated as having above-average L2 proficiency (i.e., mean group proficiency ratings of 68.9 on a 100-point questionnaire, with a population average of 50 points) were tested in this study. Using a lexical monitoring task, a variant of the lexical decision task, participants were asked to indicate if pseudowords were orthographically similar to real words in a target language (e.g., is the nonword *nogazine* physically similar to a real word such as *naufrage* [French for 'downfall']?). As expected with the valence processing effect, positive and negative emotion words produced faster reaction times than did neutral words. Furthermore, no difference in the magnitude of the brain responsivity between L1 and L2 for emotion words was found, suggesting that emotion words are equally attended to regardless of language. Similar results for equivalent magnitudes of effects across languages in an emotional word priming task have been found, further indicating the similarities of emotion word storage mechanisms in L1 and L2 (Kazanas and Altarriba 2016).

However, Opitz and Degner (2012) reported the peak amplitude wave was delayed for L2 emotion words, and this delay was predictive of L2 task performance. In other words, bilinguals who were less proficient in their L2 produced longer latency waves, perhaps as a result of greater effort required for linguistic processing (see Dewaele and Nakano [2013] for similar results following a response delay). Overall, the authors suggested that the abil-

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ity to process words with an emotional connection is slower in an L2 than in an L1. This pattern of results was maintained even when accounting for age of acquisition, frequency of L2 use, and self-rated proficiency. The ERP wave amplitude delay when assessing emotional L2 words, as compared to emotional L1 words, indicated that conceptual identification of emotional language in an L2 takes more processing time and resources than it does in a native language. According to the authors, the response delay is a product of bilinguals' difficulty in accessing the emotional components in an L2. Although this pattern of results is often found in the laboratory, it is important to note that naturalistic conversations often do not allow for a delay of processing in a fluent conversation. If ample processing time is not allowed for an individual communicating in an L2, the affective intonations of a dialogue can become flattened, and this valuable communication tool can be lost.

Why might emotional lexical access be delayed in an L2? Several key considerations have been hypothesized to be at play that reduce accessibility of the emotional lexicon in an L2. As previously discussed, the semantic network model or spreading activation model (Collins and Loftus 1975) predicts that concepts become connected as associations are created. Following this framework, as a bilingual's proficiency in an L2 increases to match that of an L1, the semantic meanings of words become integrated with each other across languages. In this sense, the meaning of an emotion word activated in one language will automatically trigger the analogous meaning in the other language. For example, an English-French bilingual who hears the word *fâché* will activate the word *angry* along with related terms, such as upset or mad. Additionally, when translating between languages, emotion words tend to map onto multiple word meanings. In particular, emotion words in an L1 tend to become associated with many definitions in an L2 (Basnight-Brown and Altarriba 2016). The increased activation of words in the L2 emotional lexicon, as compared to the L1, could create fewer direct pathways between concepts. According to the semantic network model, weaker connections can result in slower engagement of related concepts. The delayed lexical access for L2 emotion concepts mimics this concept in that it takes a longer time to access the conceptual meaning of affective language in an L2, as compared to an L1.

The presence of emotional linguistic content significantly enhances the ability to generate concrete meanings for words when translating from the L1 to L2, and L2 to L1 directions (Basnight-Brown and Altarriba 2016). A bilingual population, self-rated as having weaker L2 skills as compared to their L1 skills, provided vocal translations to words presented in either their L1 or L2 as quickly and as accurately as possible. These bilinguals demonstrated a concreteness effect (i.e., the finding that concrete words are typically more readily processed than abstract words) in both language directions for concrete, abstract, and emotion words that have more than one translation. However, for emotion words containing a single translation, the effect emerged only in the L1-L2 direction. This difference for the translation of emotion words with ambiguous meanings demonstrates that components in the emotional lexicon are uniquely represented in bilinguals. Not only does the ability to translate emotional concepts depend upon what language is activated, but this ability is mediated by the amount of overlap of concepts in the two languages. The more possible word meanings are activated, the greater the difficulty bilinguals experience in determining a translation for an emotion word. These numerous connections across lan-

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guages enhance the rich network of linguistic associations in bilinguals. Furthermore, an L2 used on a daily basis will create strong associations to word meanings in the native language. It is only when emotion concepts are used in everyday life that they begin to demonstrate processing effects that mimic those of the L1 (Degner, Doycheva, and Wentura 2012).

If semantic knowledge for word meaning was the only critical factor in emotion word processing, a direct correlation between language proficiency and word processing would have been found. However, as its name implies, the affective component of emotion word processing is a key element to cognition for this language category. When assessing for semantic understanding, an interesting result is found such that the speed to comprehend emotion words is faster in an L2 than in an L1 (e.g., Conrad, Recio, and Jacobs 2011). As word meanings become integrated between an L1 and an L2, access to the affective component of emotion words in the L2 is diminished (Dewaele and Nakano 2013). These results indicate that the definitional meaning is preserved through translation, but not the deeper emotional connotation. Because it appears L2 emotion words are lacking the full affective component, they can be processed at a quicker rate, as if they were neutral words. In other words, processing emotion words in L2 requires additional effort and cognitive resources to capture the emotionality of the language. Thus, excluding the possibility of other potentially confounding factors, it might be argued that the automaticity of emotion word processing is not maintained across an L2.

Another key consideration to this seemingly counterintuitive processing speed phenomenon is language dominance. Although a bilingual speaker's childhood language may be the L1 for speech and communication by the individual, it may not be the most commonly encountered written language (Heredia 1997). For example, native Spanish speakers attending an American university are more likely to encounter texts written in the English language than in their native language. Due to the imbalance of exposure to the Spanish language, it is possible for a bilingual's L2 of English to become their dominant written language (for a review of language switching, see Altarriba and Basnight-Brown [2007]). As the vast majority of cognitive linguistic research using bilingual populations utilize visually presented written formats, this becomes an important aspect to consider for the interpretation of results.

Noting this methodological consideration, Altarriba and Basnight-Brown (2010) asked Spanish-English bilinguals to complete an Affective Simon Task. Participants classified both Spanish and English emotion words on the basis of valence (positive or negative) or by color (blue or green) via a key press to assess the extent to which valence and emotionality are automatically processed during reading in L1 and L2. Both varieties of classifications were intermixed, forcing the bilinguals to frequently task-switch within a given language. In this type of task, a Simon Effect is said to have occurred when faster responses are produced following congruent trials (when correct response for one word matches the same response for the next word). For example, if the key press (e.g., P) to denote a positive word (e.g., kind) on a valence trial was the same key (e.g., P) to indicate a blue word on a color trial, and the response reaction time for the latter trial was reduced – this is in contrast to intermixing the keys required to respond across trials.

Contrary to findings from other studies also assessing the automatic processing of emotion words in bilinguals (e.g., Ferré et al. 2010; Ponari et al. 2015), the results from Altarriba

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and Basnight-Brown (2010) revealed processing facilitation for negative words in both languages. However, only positive words presented in English produced a faster response time. The authors argued that this imbalance resulted from the constant exposure to the English language, as compared to Spanish, on account of attending university in the United States. Additionally, there is a tendency to encounter a greater number of positive than negative emotion words in daily life (see Altarriba and Basnight-Brown [2015] for a recent review of emotion word processing between languages). Thus, response times to positive words displayed in English were facilitated (see also Basnight-Brown and Altarriba [2016]; Kazanas and Altarriba [2015] for similar considerations). This dominance of the English language and positive valence is thought to have interfered with the ability to identify and retrieve the necessary linguistic information needed to complete the Affective Simon Task.

Overall, bilingual speakers may possess the skills and ability to effectively communicate and understand the meaning of emotional words and phrases during a fluid conversation. However, the ability to fully grasp the underlying emotional content in an L2 may be significantly diminished. The sense of emotionality in L1 and L2, whereas the literal translations may be the same, are not completely preserved. To fully understand the variation in emotion word processing between L1 and L2, an assessment of how an L2 is acquired needs to be considered.

3.2 L2 emotion word acquisition

How emotional words are encoded and processed within a language can affect the way in which that same information is later activated between one's languages. When children are learning to explore the world and interact with others, they can experience an array of emotional instances. As words are used to label their environment and their feelings, the mood from the environment becomes associated with the language. From this account, L1 emotion words become associated with affection. As an adult learning to label the same objects and feelings in a new language, this affective component is often absent from the equation. L2 acquisition often occurs in a structured environment, such as a school or workplace. The emotional lessons from natural exploration and discovery are not an ingrained part of late-bilingual learning and thus this emotional association to words is learned vicariously. In late bilinguals, the emotional valence of L2 words is often processed semantically rather than affectively (see Pavlenko [2012] for a review). However, according to a recent study using eye-tracking methodology, only negatively valenced L2 emotion words are processed with the lack of affection (Sheikh and Titone 2016). According to the results of these studies, whereas positive emotion words capture attention, negative emotion words do not. Furthermore, negative emotion words appear to influence eye movements in the same manner as neutral words, suggesting negative valence is processed parallel to neutral L2 words.

Due to the experiences of acquisition and socialization surrounding each language, it is understandable that the subjective measure of emotionality is stronger in an L1 than in an L2. From a subjective perspective, learning a language through everyday life experiences will naturally incorporate emotional aspects. These lessons involve autobiographical

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dimensions and affective responses that are encoded and incorporated strongly with the L1 (Pavlenko 2012). In contrast, school-based language learning does not evoke the same naturalistic affectional connotations for word meanings. Thus, regardless of proficiency, reports that L1 is more emotional than L2 can be expected from the method of acquisition.

How is it that words in an L2 are encoded into memory? Models of L2 acquisition and processing have suggested that L2 learners demonstrate predictable patterns of cognition within their L2. Late L2 learners, or those learning post-childhood, tend to seek translation equivalencies between their L1 and L2 to understand the new language. As the information between L1 and L2 becomes more integrated within the mental lexicon of the learner, proficiency develops. In accordance with the Revised Hierarchical Model (Kroll and Stewart 1994), the meanings of L2 words become integrated with L1 as learning occurs (but see Altarriba and Mathis [1997] for an alternate account). As proficiency increases, the processing of words in an L2 mimics that of processing in L1, creating a strong association for the meaning of a word between languages. In this sense, words presented in a language that a speaker is highly proficient in will automatically activate the corresponding concept, in parallel, in any other proficient language. Languages sharing etymology often possess cognates, or words sharing physical, orthographic similarities. As would be expected, words presented in a later learner's L2 that are cognates to the L1 are processed significantly faster than are morphologically distinct words (Ponari et al. 2015). Furthermore, early L2 learners, who are arguably more proficient than late L2 learners, exhibit no processing time difference as compared to native speakers of their L2. Empirical support for this model stems from the repeated asymmetrical demonstration of bilinguals translating and processing L2 words at a faster rate into their L1, than L1 into L2 (e.g., Kroll and Stewart 1994). From this finding, it is theorized that processing from L1 to L2 uses a semantic route, relying on explicit knowledge to make the translation. However, L2-L1 processing appears to rely on lexical connections and is facilitated by association strength between the languages.

Modified versions of the Revised Hierarchical Model have been explored that suggest more direct semantic influences and acknowledge the distinction of word types. Dijkstra and Rekké (2010) proposed a localist-connectionist model called Multilink to address how level of proficiency and number of applicable word translations influence bilingual word processing. In this model, it is acknowledged that a bilingual's ability to perform a task can vary based on level of proficiency, specifically, during lexical decision, language decision, and word translation. Rather than explaining the asymmetry of bilingual translation ability as a product of differing organizational systems, both systems are thought to be present simultaneously, with the differences occurring due to association strengths of language connection routes. In other words, the facilitation of L2 to L1 processing results from stronger L2-L1 connections, thus producing greater processing power than the weaker L1-L2 links.

Following this model, the affective connotations of emotion words in a bilingual's L2 are processed in the same manner as they are in native speakers of the L2, independent of L2 acquisition age. However, eye-tracking methodology has demonstrated faster processing of positive over negative emotion words in an L2 (Sheikh and Titone 2016), whereas negative emotion words tend to capture initial attention more readily in L1 (Knickerbocker,

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Johnson, and Altarriba 2015). The inconsistency between the model and the empirical evidence here could be a result of the nature in how L1 and L2 are learned and used. As previously discussed, a native childhood language tends to be picked up through natural environmental interactions such that both positive and negative conversations lead to learning of emotional words. In contrast, when acquiring an L2, particularly when learning in formal settings post-childhood, the learner can lack the affective connection to emotion word meanings. Therefore, not only are emotion words less associated with an L2, but adult interactions tend to be of a positive nature. Second language learners often do not engage in experiences that allow for the same degree of association strength to negative emotions in an L2 as they do in their L1.

Language representation occurs even at the earliest stages of life. Prior to developing the ability to produce speech, infants pick up linguistic components from the languages to which they are exposed (Kuhl et al. 2005). Early-life exposure to language plays a critical role in the ability for adults to later relearn a language they had not mastered at birth. For example, international adoptees demonstrate better word discrimination and recall for a forgotten birth language than do individuals with no prior exposure to the target language (Choi, Cutler, and Broersma 2017). When creating semantic associations, the age of initial language learning is a crucial component for the ease in acquiring fluency of that language.

Taken together, the cognitive processes behind learning emotion stimuli in a new L2 tend to follow a pattern that changes with L2 proficiency. In a study directly observing L2 acquisition, Altarriba and Basnight-Brown (2011) taught English monolinguals sets of Spanish concrete, abstract, and emotion words. Following the new language learning training session, participants completed a Stroop color-naming task to assess for the automaticity of extracting a word's meaning. The previously studied Spanish words, presented one at a time, appeared in one of four colors. Participants were asked to indicate, via a key press, the font color of the presented word (ignoring the semantic meaning for the word) as quickly and as accurately as possible. Consistent with monolingual L1 research, emotion words produced faster color naming response times than did non-emotion words. This finding supports the notion of automaticity of emotion processing, regardless of the language. A translation recognition task was also administered to assess for knowledge retention and recall. In this task, Spanish-English word pairs were presented. Participants were asked to indicate if the two words were the correct translations of each other (e.g., hips-*caderas)* or not. In the recognition task, the newly learned Spanish emotion words produced the longest response times and had the highest error rates as compared to concrete and abstract words. The ability to report emotion words in an L2 appears to be weaker than for other word types, as evidenced by the slowing of emotional recognition compared to non-emotion words. Overall, these findings support the notion that L2 emotion words are uniquely processed in the mental lexicon – L2 emotion words continue to capture attention during encoding but are hindered during recall.

In summary, research on emotion word processing across an L1 and an L2 has indicated that a bilingual's primary, childhood language is "more emotional" than a later acquired language. However, which language is considered to be primary can switch based on the individual's environment. This is to say, the language an individual encounters most often, the dominant language, can become their L1 and be processed with a greater emotional

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advantage. Typically, emotion words in an L2 have a weaker affective component, compared to an L1, due to the lack of affection associated with words learned outside childhood. This diminished component can cause faster processing of the emotional lexicon because cognitive resources are not being allocated to comprehending the emotionality of the words. The upcoming section will explore a subset of the numerous real-world applications to the study of the emotional lexicon in bilinguals.

4 Select applications for bilingual emotion word processing

Applications for the continued study of emotion word processing across languages are abundant. As the consideration and acknowledgement of culture and diversity continues to rise in our ever-integrating society, it is particularly important that health services be mindful of the differences in affective languages used by clients. As discussed, the affective connotations of emotionally charged language is diminished in a bilingual's L2. In the field of clinical psychology, there are clear drawbacks to this L2 cognitive shortcoming that could disrupt client-therapist interactions (Dewaele and Costa 2013; Santiago-Rivera et al. 2009). Therapists and clients without the same native language risk the possibility of encountering flawed encoding for the true emotional content being conveyed. The use of proverbs and phrases in one language often do not translate with the same connotation and depth into a second language. Yet, these colloquialisms are often paramount in expressing ideas that describe an emotional state precisely (Altarriba 2003; Kokaliari, Catanzarite, and Berzoff 2013). This blockage of translation depth could conceivably lead to misinterpretations and distortions of important background details being shared by a client, or suggestions offered by a therapist. Furthermore, the lack of true emotional connection could create emotional distance between the client and the therapist, resulting in feelings of disengagement and detachment from the intended treatment. For some clients, they feel the need to create distinct identities for each language they speak in order to align their worldview and communication abilities with those of their therapist (Byford 2015). Creating distance by language switching will allow for the possibility of losing the full magnitude of valuable information and concepts being conveyed.

Although there are disadvantages to conducting health care services where clients and therapists do not share the same native language, many within the field report advantages to bilingual therapy. Being able to communicate in more than one language opens the possibility for expressing oneself with a greater range of emotion across both languages. Clients tend to switch to speaking in the L1 when describing affectively charged experiences, such as love and death (e.g., Kokaliari, Catanzarite, and Berzoff 2013). Although it may be beneficial for therapists to encourage and support a client's desire to speak in whatever language is preferred, there are benefits of using an alternative language for such arousing topics. As previously discussed, L2s are typically processed with less emotion than native languages. Having the ability to discuss highly emotional events, such as trauma, anxiety, and abuse, in an L2 may allow for a less arousing conversation with reduced emotional

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backlash when recounting such memories (Byford 2015). From the distance created between the experience and recounting the memory in an L2, patients can productively reflect on their hardships. Patients and therapists alike can detach from the emotionally charged events to allow for a more unbiased discussion. This process can allow patients to create a sense of self separate from the memory, enabling them to work through internal conflicts and gain new perspectives. When a therapist is also able to communicate using this alternative dialogue, the patient is granted the opportunity to engage in conversation with whichever sense of self they feel more comfortable utilizing (Byford 2015). Within the health care industry, having the ability to conduct therapy in multiple languages can be productive and ultimately benefit the client.

However, not all sectors of the professional realm have revealed such benefits to bilingual individuals. Within the justice system, research on bilingual emotion-language processing has revealed important implications for admissible trial evidence. Caldwell-Harris, Sanchez, and Nayak (2014) conducted an experiment to assess the accuracy of polygraph results administered to Spanish-English bilinguals. One group of bilinguals were heritage language learners in that English was their dominant language. A second group consisted of Latin American immigrants who were Spanish language dominant. All participants heard or read emotional phrases in both languages while skin-conductance responses (SCRs) were recorded. SCRs are obtained by attaching electrodes to the skin and recording changes of the autonomic nervous system, such as heart rate and perspiration. Higher SCRs are thought to be an indication of high stress responses as would be expected if an individual is willfully not telling the truth.

During the polygraph test, the heritage language learners showed the expected lie effect in their dominant language of English. When completing the polygraph test in English, results from an English language dominant individual can more accurately indicate truths and fabrications. However, in the immigrant group, all responses provided in English produced high SCRs, whether or not a lie or truth was told. A biased interpretation could easily be drawn from the polygraph tests administered to a bilingual whose L1 is not the language being utilized. Furthermore, emotion phrases heard or read in an L2 produce relatively weak SCRs than when administered in an L1 (see Caldwell-Harris [2015] for a discussion). In the United States, English is the dominant language and therefore court proceedings are majorly conducted in English. High SCRs can be the product of truth fabrication, or simply due to the implementation of the test in an L2; however, a polygraph machine cannot distinguish these potential causes. As such, the administering of polygraph tests should be done with caution, particularly if the test uses emotionally arousing information conducted outside an L1.

Beyond the professional realm, the study of emotion processing in bilinguals is also relevant to individuals on a personal level. In everyday life, decision-making can be influenced by the emotional content of a situation. Since emotion is processed slower in an L2, how does this affect decision-making in emotional scenarios presented in an L1 versus an L2? Data collected worldwide consistently indicate the predictability of how bilinguals make judgments depending on the language in which the deliberation is presented (Keysar, Hayakawa, and An 2012). The language in which an individual is less proficient in will understandably require more cognitive resources to process than does a fluently compre-

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hended language. Therefore, when emotionally charged content is presented in a relatively weak L2, not only are the L2 emotion words processed slower and with less meaning, but more deliberate thinking is required to generate a response. Under these conditions, bilinguals tend to make rash emotional decisions stemming from instinctual responses – the cognitive resources required to analyze an L2 emotional situation are exhausted on comprehension. In contrast, those making a decision within a proficient language exhibit more problem-framing approaches and more often make responses following intellectual debate. The reduced emotionality of an L2 can allow for maintaining greater emotional distance in decision-making.

To summarize, the usefulness of bilingual research is abundant. Persons having experienced traumatic or unsettling events can benefit from the ability to create distance from the memory and an alternative self through an L2. However, therapy involving bilingual clients or therapists must be cautious of the possibility of miscommunication, particularly during emotion-heavy discussions. Similar considerations must also be taken into account when collecting evidence from bilingual individuals to be used within the justice system, as polygraph tests have been shown to provide biased results when used for emotionally arousing information. Lastly, emotional decision-making has been shown to vary across an L1 and L2, with L1 emotion words resulting in more affective responses and L2 more analytical responses.

5 Conclusions and future research directions

The cognitive psycholinguistic research on bilinguals reviewed in this chapter provides a fascinating perspective on the processing of emotion words. The automatic capture of attention towards the affective component of words, regardless of language, indicates our natural inclination to interpret emotional stimuli with a particular importance. From an evolutionary perspective, the ability to readily attend to emotion words over neutral words allows for enhanced processing of the affective information as a means to determine if a stimulus should be approached or avoided. In the case of negatively valenced stimuli, emotion words may provide information about pending danger in the environment that could cause threat to survival. In an L1, emotion words, particularly those with a negative valence, not only capture attention but require more time to be processed than do other word types. However, emotion words in an L2 are often processed with greater speed but with less internalization of the affective component than its semantic L1 equivalent. Whereas the general notion that an L1 is more emotional than an L2 has consistently been concluded, much of the research reviewed in this chapter has narrowed this statement. The data on bilingual word processing support enhanced emotionality in an L1 mainly for negatively valenced words, and not positive words (see Altarriba [2017] for a recent discussion). It seems there is a combination of factors that contribute to affective processing differences between languages, including degree of emotional experiences, context of language learning, and association strength between word meanings.

Over the past decade, understanding of the emotional lexicon has expanded tremendously. However, there are many avenues of further research that should continue to be

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explored. Most of the current research on bilingual language processing has used English-speaking participants in some capacity, whether English is the participants' primary, secondary, or dominant language. Replicating current findings with alternate languages would further strengthen the universal understanding of how the emotional lexicon functions. At the present time, it is difficult to identify if the previously discussed effects of the differentiation of word types is unique to English, Latin-based languages, or fully extend to all languages. Incorporating the processing of emotion words in non-verbal sign languages may also provide valuable information regarding the understanding of emotion processing.

Further exploring these concepts using varied methodologies and technologies should continue to occur. Much of the current research in this field has focused on comparing translation production abilities between two languages. Continuing to contrast other skills of language processing, such as word recognition, should occur to gain a fuller idea of all stages of emotion translation processing. Future research should explore both production and recognition skills with a variety of tasks including, but not limited to, Stroop tests, lexical decision tasks, neurological imaging, and eye-tracking. An analysis that coherently combines behavioral, biological, and neurological processing would provide insight into how behavior, emotion, language, and cognition interact. Furthermore, future research designed to understand individual differences in the emotional lexicon should be pursued. These factors may include cultural considerations, emotional and language development across the lifespan, or general cognitive processing abilities.

When conducting new research in this area, the importance of which language task instructions are presented should be emphasized. As discussed, the affective aspect of language can be interpreted to varying degrees as a result of using L1 or L2. If a task is to understand emotion word processing within an L2, the context the task is presented in should mimic the language the response will be in (see Grosjean 2001). In this way, the interpretation of emotionality will stay consistent throughout the experiment.

Generating an understanding for how the emotion lexicon functions across an L1 and an L2 continues to be a growing area in the psychological sciences. The processing of the emotional lexicon within and across monolinguals and bilinguals will continue to be a subject of investigation that should span a variety of methodologies and linguistic considerations. Implementing the findings from bilingual research will allow for enhanced communication practices within and across cultures and language boundaries.

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Martin S. Remland and Tricia S. Jones

60 Emotions in intercultural communication

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Abstract: Theoretical accounts regarding the nature of human emotion, which include the physiological, cognitive, and expressive elements of emotional experience, tend to underestimate the impact of socialization. The connection between emotion and communication, however, is considerably more than a biological phenomenon. We begin the chapter with a brief discussion highlighting the basic elements of emotional experience. Then we address emotion as a social construct derived in large part from one's cultural experiences. In the third section, we address the basic connection between language and emotional experience, which considers how one's language unavoidably reflects one's experience of emotion and also creates problems of translation when there are cultural differences in the meaning of emotion concepts. Then we review the research on cultural differences in the nonverbal communication of emotion, highlighting facial expressions as the primary means of exchanging emotional messages. The following section introduces important cultural differences in how the members of a cultural group are predisposed to talk about their emotional experiences; and we conclude this chapter by showing how differences in the communication of emotion can create unique challenges in the context of intercultural conflict.

1 The nature of emotional experience

Despite varying definitions, scholars usually agree that emotion represents a basic survival mechanism that includes cognitive, physiological, and behavioral or expressive elements (Kitayama and Markus 1994). In this section we briefly address each of these key elements.

1.1 The cognitive element of emotion

Contrary to the common misconception, cognition is an important component of emotion. Appraisal theories of emotion (Lazarus 1991; Ortony, Clore, and Collins 1988) explain how

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judgments about actors, behaviors, and events lead to emotional experiences. Lazarus (1991) argued that we have an emotion because of two judgments labeled primary appraisals and secondary appraisals. Our emotional experience is a function of both appraisal processes acting in tandem. Primary appraisals refer to a generally positive or negative emotional experience. Secondary appraisals refer to a specific kind of positive or negative emotion. Using a simple map metaphor, the primary appraisal lets us know we're in Pennsylvania, but the secondary appraisal lets us know whether we're in Pittsburgh or Philadelphia.

According to Lazarus (1991), all negative emotions arise from appraisals that the situation impacts on personal goals (i.e., goal-relevant) in a way that makes it harder for a person to achieve those goals (i.e., goal-incongruent). All positive emotions come from appraisals that the event, person or situation is relevant to our personal goals and makes it easier for us to achieve those goals. As we will see in the next section, the "self" orientation of the person, in terms of individual versus collective goals, shapes emotional reactions.

Secondary appraisals focus on additional issues that help determine the specific emotion felt. According to Lazarus, there are three additional issues to consider: What or who is to blame for the event/situation (judgments of accountability)? How well can I solve this problem and manage my feelings (coping potential)? How likely it is that things will get better or worse (future expectancy). Gudykunst et al. (1995) distinguished between goal-congruent (or positive) emotions and goal-incongruent (or negative) emotions. In a Western model, they conclude there are six goal-congruent emotions: compassion, happiness, hope, love, pride, and relief. And there are at least nine goal-incongruent emotions: anger, anxiety, disgust, envy, fright, guilt, jealousy, sadness and shame.

Appraisal explanations can help distinguish key emotions. For example, the emotion of shame has received a great deal of attention. Shame is defined by Tangney as a painful emotion in which the self, not just behavior in the event, is painfully scrutinized and negatively evaluated. That is, the person or "self" is found wanting. Shame is often accompanied by a sense of shrinking and being small, and by a sense of worthlessness and powerlessness. Often when people feel ashamed, they try to hide themselves with their hands or literally try to physically escape the situation (Tangney and Fischer 1995).

As Albertsen, Connor, and Berry (2006) discuss, guilt is an uncomfortable emotion, occurring when a person believes one has done or considers doing something wrong. Guilt motivates people to make decisions they judge to be morally right. The tendency to feel guilt is a fairly stable trait; but some people are more sensitive than others (Tangney et al. 1992). There is an important difference between guilt and shame; where guilt is a negative emotion resulting from a negative judgment about one's behavior, shame results from a negative judgment about the self.

1.2 The physiological element of emotion

The experience of emotion accompanies some physical sensation associated with an emotional experience. For instance, strong emotions produce physiological arousal: increased

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heart rate, elevated blood pressure, raised skin temperature, muscle tension, and so forth. Some of these changes, like increased heart rate and adrenaline flooding, are noticeable to the person having them; other changes may not be recognized (like pupils dilating) but can still affect the overall experience of emotion (for example, by signaling to another person that you are happy or upset). Our feelings are "embodied" as Denzin (1984) suggested in his book *On Understanding Emotions*.

1.3 The expressive element of emotion

As important as the cognitive and physiological elements of emotion, the expressive element represents the ways that individuals exchange messages, both the encoding and decoding of their emotional experiences. Studies of facial expressions, for example, suggest that measurable changes in facial muscles correspond to discrete emotion categories. Based on their pioneering research, Ekman and Friesen (1976) were able to identify anger, sadness, disgust, surprise, happiness, fear, and contempt, as universal expressions of these emotional states. Other emotions cited in the literature often include shame, embarrassment, pride, interest, and guilt, although there is less consensus about how these emotions are expressed across cultures (Izard 1977). There is, however, considerable agreement that the expression of these emotions and others include a spontaneous as well as posed or display rule component; that is, an involuntary expression evoked automatically, and a voluntary expression governed by what a particular culture deems as appropriate for the situation (Remland 2017). The expressive element of emotion includes a nonverbal (e.g., facial and vocal expressions) and to a lesser degree verbal or linguistic mode of expression. Since the nonverbal channels of communication tend to be less controllable than the use of language, they are generally regarded as more "honest" indicators of one's genuine emotional state.

2 Culture and the experience of emotion

Our culture influences the emotions we feel, when we feel them, and how we show them to others. There are many ways to view cultural influence. For example, we can think about culture's influence across time by realizing that the "basic" emotions we take for granted today (e.g., anger, sadness, contempt) have not always been the emotions "of the time" (Stearns 1993).

The cultural experience of emotion produces rituals that may be unfamiliar to the members of other cultural groups. In this sense, rituals are formalized emotion scripts; the more relevant the emotional experience, the more a culture develops rituals for that emotion. For example, the Navajo have a strong fear of dead bodies (Niedenthal, Krauth-Gruber, and Ric 2006). They believe the dead body houses evil spirits and if the body is not handled in elaborate ritualistic ways, the spirit will come back to do harm. When someone dies, the family does not come into contact with the body but hires four mourners to wash and formally dress the body. The mourners put the moccasins of the dead person on

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the wrong feet to ensure that the dead will have trouble walking back to the village from the burial site. Fessler (2007) reports a particularly powerful ritual among the Philippine Ilongots:

> In this small community, ingroup harmony was essential for survival of the group. *Liget* – an emotion denoting energy, passion, and anger simultaneously – was one of those threatening emotions (Rosaldo 1980). A ritual of headhunting was in place, should *liget* arise. When one or more Ilongot men experienced the heavy feeling of *liget*, a group of them would go out to kill an outsider. After the beheading the Ilongot men came home purged of violence, and the community celebrated the overcoming of *liget* by singing together. (Fessler 2007: 499)

What do we get emotional about? We get emotional about what matters to us. If something is not important to you it won't make you happy, sad, angry, fearful, and so on. Emotion tells the "truth" about what we value, what we think is bad or good, and what we believe is right and wrong (White 1994). From a cultural standpoint, the values underlying cultures operate to highlight or extinguish certain kinds of emotional experiences. Issues of identity are paramount in determining what is important or valued (Remland, Jones, and Foeman 2016).

For example, Markus and Kitayama (1991, 1994) compared the experience of Westerners and East Asians, in terms of ego-focused and other-focused emotions (also referred to as individualist and collectivist cultures, respectively). Ego-focused emotions are centered on the individual and involve such experiences as self-affirmation. An emotion like anger is ego-focused to the extent that it reflects an affront or threat to one's personal integrity. Other-focused emotions have the "other" as the primary referent. Indeed, Cohen and Gunz (2002) argue that people from collectivist cultures actually see themselves from other's points of view – as others see them. In their study of Chinese and Americans, they found that Easterners were more likely than Westerners to take a third-person perspective on themselves when asked to remember situations in which they, as individuals, were the center of attention. Westerners saw situations in terms of how they felt and assumed others in the situation would feel the same. Easterners first identified the expected emotion – what a general member of their culture would assume should be felt, and then saw their own emotions as a manifestation of that general expectation.

2.1 Happiness

Happiness is highly valued in American culture; because "being happy" signals success in "standing out", being unique, and/or fulfilling one's goals. You can see the American emphasis on "happiness" in American schools where activities like "show and tell", smiley face stickers, student of the week, and so forth are geared to making students happy with themselves – building self-esteem. Researchers have examined how this quest for happiness and life satisfaction differs across cultures. In one study, 8,557 researchers asked people from 46 countries how often they experienced positive and negative emotions and how satisfied they were with their lives (Kuppens, Realo, and Diener 2008). The results showed that people in individualist countries have a heightened sensitivity to negative emotions, that cultures which value happiness (like Americans) are more influenced by being unhap-

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py – by not attaining their goal of happiness – than are cultures that de-emphasize happiness. But the goal of happiness is not universal – not all cultures value happiness. For instance, during her stay with the Ifaluk (on a Pacific atoll), the anthropologist Catherine Lutz was reprimanded for smiling at a girl who acted happy. The Ifaluk condemn this emotion because it is thought to lead to a neglect of duties (Lutz 1987) that are central to the social organization of Ifaluk life (Mesquita and Albert 2007: 486).

Happiness is de-emphasized in cultures following Confucian traditions since being happy may cause jealousy in others. For example, the Japanese, emphasizing the obligation to accommodate to others, practice *hansei* ('self-reflection or self-criticism'). *Hansei* involves focusing on one's shortcomings and on possible improvements. *Hansei* is institutionalized in Japanese elementary schools where children, at the end of each day, are encouraged to search for their inadequacies and weaknesses so they can find ways to improve (Mesquita and Albert 2007). Moreover, the flip side of happiness, sadness, is also not universally experienced or valued. In fact, the concept of sadness, so common to American and European cultures, is not even recognized as an emotion in many languages of the world (Wierzbicka 1992).

Some large-scale studies indicate that individuals often appraise emotional situations in similar ways (Matsumoto, Nezelek, and Koopmann 2007; Mauro, Sato, and Tucker 1992; Scherer 1997; Scherer and Wallbott 1994). Yet research also shows some interesting cultural variations. As we noted earlier, Americans have a penchant for the emotion of happiness. Of course, other cultures feel happiness as well – just not necessarily about the same things. For instance, Mauro, Sato, and Tucker (1992) found that different antecedents caused happiness for Americans, Northern Europeans and Japanese. Americans were more likely than Japanese to see things like births as events that "cause" happiness.

Americans often see anger as productive and are often not inhibited about showing their anger. Americans think in terms of channeling anger into something constructive, which portrays anger as energizing and motivating (Kovecses 2000). But other cultures see anger as useless or counterproductive:

> A Zulu expression translates into English as 'to grind rotten mealies'. The expression refers to the pointlessness of anger. It derived its meaning from the staple food of the Zulu, mealies, or maize corn. It relates to the idea that one should not expend energy on a useless activity – no one would spend energy grinding rotten corn nor should anyone spend energy getting angry. (Kovecses 2000: 168)

We see similar resistance to anger in other collectivistic, tribal cultures. The expression of anger, for example, is strongly disapproved of by the Utku Eskimos (Eid and Diener 2001).

2.2 Guilt

Eid and Diener (2001) analyzed four national groups in their study of emotions in 41 countries (Suh et al. 1998). In collectivistic cultures guilt is more important, whereas in individualistic cultures pride is of greater relevance. In a study of 246 college students, Albersten, Connor, and Berry 2006) found significant differences between ethnic groups, with Asian-Americans higher in guilt than European and Latin Americans. But guilt does not seem

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relevant for some cultures. Fessler (2004) studied guilt in American and Bengkulu cultures. He found that guilt was a prominent emotion for Americans but was almost completely absent from Bengkulu culture.

2.3 Shame

Shame is a self-conscious emotion that results when a person, through his or her own behavior, loses "face" or falls short of expected standards of behavior (Lewis 2009). According to Bedford and Hwang (2003), when persons from Western cultures experience shame they generally focus on "self" which is construed individually (i.e., a self that does not encompass others). However, when persons from Eastern cultures experience shame, the self generally extends to family members and significant others (Tang et al. 2008). This is similar to the idea of transferred shame – your shame is my shame (Dost and Yamaguri 2008).

Even though different cultures experience shame, and perhaps experience it in the same way, they may respond to shame in different ways. Fischer, Manstead, and Mosquera (1999) conducted a study with samples from Spain and Holland, which they characterized as "honor based" and individualist cultures, respectively. They found that Spanish participants interpreted shame as an indication of honesty and vulnerability and thought that shame should be shared. But Dutch participants interpreted shame as a threat to self-esteem and felt it should be concealed. Bagozzi, Verbecke, and Gavino (2003) studied Dutch and Filipino salespersons who reported that they were shamed by customers. Dutch salespeople responded by withdrawing from customers. However, Filipinos responded by working harder to engage with customers, increase their relationship-building efforts, degree of courtesy and general work efforts. The Dutch saw shame as a signal to end relationships, whereas Filipinos saw shame as a signal to repair the relationships (Goetz and Keltner 2007).

3 Language, culture and the experience of emotion

The association between language, culture and emotional experience appears to be twofold: first, the words or emotion concepts people use can reflect the emotional environment of their particular culture and its history; and second, the use of emotion concepts often vary across cultures, shaping both the personal experience of one's emotions (Lindquist, MacCormack, and Shablack 2015) as well as the interpretation of another person's emotions (Gendron et al. 2014).

3.1 Language as a reflection of emotional experience

In her analysis of the rules societies create to guide emotional experience, Arlie Hochschild (1983) notes that in 19th-century America, free people were supposed to feel contempt for

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slaves, because slaves were considered to be subhuman. Some cultures have feeling rules that create emotions unknown in other cultures. For example, in Greece, they have an emotion called *philotimo,* which is understood as an "honor" emotion. A *philotimos* person can be a person who is 'honorable' (*éntimow*), 'honest' (*tímiow*), 'generous' and 'hospitable' (*filójenow*), 'good' (*kalów*), or 'worthy' (*ájiow*), among others. Despite its tendency to elude precise definition, *philotimo* is valued in Greek society more than status or wealth (Koutsantoni 2007).

Anthropologist Helen Fisher points out that the notion of romantic love (being "in love" with someone) was a creation of the modern era (Fisher 1992). If we were living in the Middle Ages and talked to someone about romantic love, they would have no idea what we meant. They might understand chivalric love, platonic love, maternal love – but not romantic love. As a concept, it simply did not exist for them

The importance of guilt for collectivistic cultures may explain why a culture like China has more types of guilt in their language. Bedford (2004) found that three types of guilt can be differentiated in Mandarin language: (i) 'the guilt felt from failure to uphold an obligation to another' (*nei jiu*), (ii) 'the guilt felt in case of moral transgression' (*zui e gan*), and (iii) 'the guilt felt in case of legal transgression' (*fan zui gan*).

Tiffany Watt Smith, in *The Book of Human Emotions*, observes:

> When we think of an emotion, we think of it as something that happened to one person. But there's this wonderful concept among the Baining people of Papua New Guinea. They talk about *Awumbuk*, which is what you feel when your visitors leave and you get this feeling of heaviness in the household. They leave a bowl of water out overnight, because they think the heaviness is caused by a mist their guests have left behind so they can travel lightly. They take the bowl of water out the next morning and throw it away, and everyone comes back to life again in the house. That's an example where an emotion isn't thought of as coming from within)" (Tiffany Watt Smith, quoted in Lofthouse 2015: 87).

The emotion of shame and other self-conscious emotions are more important and differentiated in some cultures than they are in others. One study reported as many as 113 terms for shame in contemporary Chinese; another identified more than 150 Chinese words for varieties of shame, guilt and embarrassment, with only a few dozen in English (Li, Wang, and Fischer 2004).

Similarly, the indigenous American Cree language contains some 30 verbs referring to different causes of anger, such as anger resulting from insults, walking, mutual ill-feeling, taking leave of an individual on a walk and offensive visual sights (Watkins 1938: 284–285; quoted in Hupka, Lenton, and Hutchison 1999). Western societies have depression-related vocabularies stemming from Western European institutions. In contrast, there are few lexical equivalents of the English 'depression', 'anxiety' and 'tension' in several non-European languages such as Yoruba or Chinese (Leff 1973), challenging the cross-cultural validity of depression as a universal disorder (Jadhav 1996). Another example comes from a highly collectivistic (Suh et al. 1998) Ghanaian culture, where two Ghanaian languages, Fante and Dagbani, lack an indigenous equivalent of the English 'loneliness', raising the question of whether this corresponds to the relative lack of instances in which an individual is alone in Ghanaian society (Dzokoto and Okazaki 2006).

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3.2 Emotion semantics and the problem of translation

As we noted above, emotion concepts often vary widely from one culture to another. As Goddard has pointed out, "cross-cultural research of any kind cannot afford to ignore the problems posed by semantic differences between languages" (Goddard 2002: 19). With respect to emotion concepts, for example, even European languages pose translation problems. Researchers often take the German *angst*, as a translation for the English 'fear'; the French *tristesse* for the English 'sadness'; the Italian *rabbia* for the English 'anger'. Yet in each case there are subtle differences in the meaning of these emotion concepts (Goddard 2002). Furthermore, there are many instances in which an emotion concept in one language has no semantic equivalent in a different language. For example, there does not appear to be any semantic equivalent for the English sadness in the Tahitian language and no equivalent for disgust in the Polish language (Wierzbicka 1999).

If we were living in the 3rd to the 11th century as Hindus, we would have a different list of basic emotions. While there is no direct English translation of the Sanskrit, we could summarize them as: (1) *rati* – sexual passion, love or delight, (2) *hasa* – amusement, laughter, humor or mirth, (3) *soka* – sorrow, (4) *krodha* – anger, (5) *bhaya* – fear or terror, (6) *utasha* – perseverance, energy, or heroism, (7) *jugupsa* – disgust or disillusion, (8) *vismaya* – wonder, astonishment or amazement, and (9) *sama* – serenity or calm (Shweder et al. 2007).

Cross-cultural research is consistent with the idea that language influences the perception of emotion. For instance, speakers of Herero, a dialect spoken by the remote Himba tribe in Namibia, Africa, and American English speakers perceive emotions differently on faces. When participants were asked to freely sort images of identities making six facial expressions (anger, disgust, fear, happiness, sadness, and neutral) into piles, English speakers created piles for anger, disgust, fear, sad, happy and neutral faces, but Herero speakers did not sort in this way. Instead Herero speakers produced piles that reflected multiple categories of facial expressions (e.g., smiling, neutral, wrinkled nose, scowling, and frowning faces). The Herero speakers sorted similarly to one another, suggesting that they understood the instructions but were using different perceptual cues (and perhaps different categories) than the English speakers to guide their sorts (Gendron et al. 2014).

4 Cultural influences on the facial expression of emotion

One of the primary functions of nonverbal communication is emotional expression. Some of our facial expressions are innate signals of emotions or social motives. Knapp and Hall (2008) reviewed numerous studies on the facial expressions of children deprived of hearing and sight, infants, nonhuman primates, and persons from both literate and preliterate cultures. Given the remarkable similarities observed in the expressions of these groups, they concluded, "A genetic component passed on to members of the human species seems probable for this behavior" (Knapp and Hall 2008: 72).

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Despite the universal nature of some emotional expressions, the display and recognition of many emotions differ widely across cultures. For example, in America, when someone is afraid, the emotion script is usually to scream or yell and run away. But the Balinese have a very different emotion script for fear. They fall asleep in the face of something frightening. In Balinese culture, falling asleep is seen as a good way to avoid the terror (Niedenthal, Krauth-Gruber, and Ric 2006). Emotional display rules also influence decisions about whether to seek help or emotional support, which can vary according to one's culture. For example, several studies have found Asians to be less willing to seek support in times of stress than Americans (Burleson and Goldsmith 1998).

By following rules and rituals, we learn at a relatively young age how and whether to reveal our emotions in social situations; in this way our emotional exchanges may reflect the influence of culture. These cultural display rules can lead us to misrepresent our true feelings (Ekman 1972). Cultural taboos against showing anger in public, for example, are very common. Someone who feels enraged might show only mild disapproval or might even cover up the anger with a social smile. This seems to be especially true among Asian populations, where people routinely use masking smiles to conceal negative feelings. Cultural differences in smiling may in fact reflect actual differences in how people relate to the challenges of everyday life.

In their pioneering studies documenting cross-cultural similarities in the facial expressions of emotion, Paul Ekman and Wallace Friesen also found a cultural difference, which led to their discovery of cultural display rules. They observed that in the presence of another person, Japanese participants in one of their experiments were more likely than American participants to use masking smiles to cover up negative emotions. They explained that Japanese were following a rule to promote positive relations with others in certain situations (Ekman 1972).

Building on this idea of cultural display rules, David Matsumoto (1990, 1991) developed a theory of emotional expression that incorporates the cultural values of individualism-collectivism and power distance. According to Matsumoto's theory, because individualistic cultures encourage self-expression, its members are relatively free to display a range of emotions, positive or negative, toward others. In addition, the politeness rules most people follow prompt individuals to be friendly, smiling at others, regardless of who they are. But in collectivistic cultures, people learn to put the needs of the group ahead of their own needs. This pressures them to suppress negative emotions (e.g., anger, disgust, sadness) toward in-group members because the display of such emotions will upset the harmony of the group. Yet there is little pressure to conceal negative emotions or to show positive emotions toward out-group persons. The lack of group affiliation with such persons lessens the pressure to promote positive relations.

The second part of Matsumoto's theory focuses on the power distance orientation of a culture – the degree to which it promotes the maintenance of status differences among members. High power distance cultures endorse displays of emotion that reinforce hierarchical relations (i.e., status reminders), such as showing anger toward a low-status person or appeasing a high-status person (e.g., smiling). Low power distance cultures embrace egalitarian values and teach the importance of treating people as equals. Thus, there is less pressure in these cultures for members to adjust displays of emotion according to the

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status of another person. Although it isn't always the case, high power distance cultures tend to be collectivistic, whereas low power distance cultures tend to be individualistic. For instance, high power distance/collectivistic cultures include most Arab, Latin American, African, Asian, and southern European nations. Low power distance/individualistic cultures include South Africa, North America, Australia, and northern Europe (Hofstede 1980, 1983).

There are also cultural differences in the recognition and interpretation of emotional expressions. For instance, numerous studies have shown an in-group bias; that is, a tendency to recognize the emotional expressions of in-group persons more readily than those of out-group persons. A recently proposed explanation for this cultural bias is the dialect theory of facial expressions (Elfenbein et al. 2007). This theory, while accepting the principle that communicating emotion is universal, rests on two basic propositions: (i) as with other languages, different cultures can express themselves in different dialects; and (ii) the presence of dialects has the potential to make recognition of emotion less accurate across cultural boundaries. In a study comparing the posed facial expressions of participants from Quebec and from the West African nation of Gabon, researchers observed significant cultural variations in the participants' facial expressions of contempt, shame, and serenity, and more subtle differences in their facial expressions of anger, sadness, surprise, and happiness. The findings also showed an in-group bias. Participants were better able to recognize their own facial expression dialect than that of the other cultural group (Elfenbein et al. 2007).

Research also reveals an interesting difference between East Asian and Western cultures in recognizing and interpreting emotional expressions. Persons in East Asian cultures, consistent with their preference for holistic/high-context information processing compared to the West, are more likely to interpret facial expressions taking the overall context into consideration. Researchers in two experiments found that when identifying the emotions of individuals, Japanese observers were more inclined to incorporate information from the social context, specifically the facial expressions of surrounding individuals, than were Westerners. Tracking the eye gaze of the participants, the researchers found that the Japanese were more likely than the Westerners to look at the surrounding people (Masuda et al. 2008). But this cultural difference, which depends on an observer's ability to process multiple sources of information, often declines with age, thus explaining the finding of a recent study showing a difference in processing when comparing *young* adult Koreans with young adult Americans, but not when comparing *older* Koreans and Americans (Ko et al. 2010).

Cultural and racial stereotypes can also bias our judgments of facial expressions, particularly in response to the faces of group members we regard as threatening in some way. In one experiment, White undergraduate students viewed a scary scene from the 1991 movie *Silence of the Lambs*, and subsequently rated the intensity of emotions expressed on different faces. The researchers hypothesized that arousing fear in the participants would cause them to see more danger in the faces of some people than others, based on cultural and racial stereotyping. As expected, the participants' perceived greater anger in Black male faces and also greater anger in Arab faces than in the faces of other less threatening faces (Maner et al. 2005).

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5 Cultural influences on the verbal communication of emotional experience

The basic principle of cultural pragmatics is the notion that different speech communities have different ways of speaking or cultural scripts that reflect that culture's expectations and norms (Goddard 2002). For instance, cultures differ in their use of high versus low-context communication codes (Hall 1983). The context of communication includes all the elements of an interaction except for the communicators' verbal and nonverbal messages. The contextual elements in an interaction include one's prior experiences, the interpersonal relationship, the occasion, the surrounding environment, and so forth. Low-context cultures rely more heavily on verbal communication to get a message across than do high-context cultures, which rely more on the unspoken messages embedded in a particular context (often silence). Collectivistic cultures tend to use high-context communication whereas individualistic cultures rely more heavily on verbal expression. Richard Brislin (2008) offers the following example:

> People in collectivist cultures do not feel the need to verbalize their appreciation to members of their groups, since everyone already knows they are grateful to each other. In Korea, these phrases are used more often with people who do not know each other well. Once people spend time together and become close, they assume that favors and positive behaviors are appreciated. If they had to say, "thank you" frequently, this would be a sign that the relationship is not particularly close. (Richard Brislin 2008: 44)

Low-context, individualistic cultures place a heavier burden on the speaker to get a message across than on the listener to understand the message. In contrast, high-context, collectivistic cultures are more likely to blame the listener for not understanding a message than the speaker for not being clear enough.

Another cultural script concerns the use of a direct as opposed to an indirect language. A direct style is blunt and straightforward; the speaker says exactly what is on her mind, leaving little doubt about the meaning of the message. With an indirect style, the speaker "beats around the bush" instead of saying exactly what she thinks. Often, the desire for honesty motivates directness, while the desire for good relations (i.e., face-saving; harmony) motivates indirectness. The direct style is most common among low-context, individualistic cultures, whereas the indirect style is typical of high-context, collectivistic cultures (Gudykunst and Ting-Toomey 1988). We often use indirect language with people in order to avoid confrontations, hurt feelings, imposing, bragging, and unpleasant topics – goals more congruent with high-context, collectivistic orientations than with low-context, individualistic orientations. Indirectness is a form of non-literal communication, where the speaker's intended meaning differs from the literal meaning. Any speech act can be indirect (e.g., apologies, insults, compliments, requests, etc.).

6 Emotions, communication, and intercultural conflict

Cultural differences in the experience and expression of emotion can lead to misunderstandings and conflict. This section considers intergroup emotions theory as one explana-

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tion for intercultural conflict and then focuses on the role that particular emotions play in escalation and management of intercultural conflict.

6.1 Intergroup emotion theory

One effort to explain the connection between intercultural conflict and emotion is intergroup emotion theory. As Smith and Mackie (2007) explain, intergroup emotions arise when people identify with a social group and respond emotionally to events associated with the group. The more persons identify with the group – draw their sense of self from membership with that group – the more prone they are to intergroup emotion. The group member depersonalizes and reacts as a member of a group rather than as a unique individual.

Intergroup emotion theory helps explain the emotional power of the in-group/out-group dynamic. For example, when an out-group is appraised as threatening to the in-group, negative intergroup emotions such as fear or anger may result. These can become part of an overall configuration of prejudice against the out-group that can prompt biased judgments and discriminatory behavior.

When out-groups are appraised in positive ways, positive emotions including sympathy or compassion may be evoked. These positive emotions lead to more favorable overall reactions to the out-group as well as to more positive behaviors. Of course, not all out-groups are treated or perceived in the same way. For example, out-groups who are the targets of anger may be attacked, while out-groups that are the target of disgust may be avoided.

In conflict, and especially in intercultural conflict, some emotions are more damaging to relationships compared to other emotions. Contempt and shame, in particular, tend to escalate conflict. One way to manage conflict that can serve as a roadblock to escalation is through forgiveness. But the willingness to forgive also varies as a function of culture (Remland, Jones, and Foeman 2016).

6.2 Contempt, shame and intercultural conflict

Contempt is an emotion we feel when we see the other as inferior; it is the emotional core of the dehumanization of others based on their culture. As Ortony, Clore, and Collins (1988) explain, contempt may be a response to the action of another or a response to an inherent characteristic of the other. Some cultures are more prone to express contempt than other cultures (Miller 1997). We may find ourselves denying the humanity and suffering of others if we look at them with contempt, as members of an out-group we devalue (Rohmann et al. 2009). Unfortunately, we know that in intergroup contexts individuals ascribe an essential humanness to their own group, and deny the out-group this same trait (Leyens et al. 2003). This emotional side of prejudice is especially vulnerable to salient out-group characteristics, like race. As a consequence, the out-group is judged as less human than the in-group.

Expressions of contempt may generate different responses depending on the culture of the target person. Research shows that, in general, collectivist cultures are more sensitive

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to insult or face loss than individualist cultures, especially when the target views the expression of contempt as intentional (Ashton-James et al. 2009). The most prominent finding of Tokunaga's (2008) research is that hurt is positively associated with interdependence. Cultures that value group harmony are influenced by hurtful messages to a greater degree than those who value internal goals.

An honor culture is a collectivistic culture that has been studied in terms of response to insults. Beersma, Harinck, and Gerts (2003) investigated the impact of insults on emotional response and conflict behavior in workplace conflict among people who are sensitive to threats to identity (discussed as honor sensitivity). In honor cultures, reputation is extremely important. According to Rodriguez Mosquera, honor "has to be socially claimed and recognized in order to have any value" (Rodriguez Mosquera 1999: 13). When the self is humiliated or offended during a conflict, "a person's claim to honor and to be treated with respect is denied" (Rodriguez Mosquera 1999: 13). In honor cultures, honor can be defended or restored through actions such as aggression or expressions of anger. Therefore, individuals who attach much value to honor react to conflicts in a more aggressive manner than those who attach less value to honor (Rodriguez Mosquera, Manstead, and Fisher 2000, 2002).

Chun-Seng and Bond (2008) argue that for some cultures, open shaming serves a cohesive social function within groups, but not between in-group and out-group members. For example, shame plays a distinctive role in China and is even considered a socially appropriate emotion because it may discourage inappropriate behaviors (Li, Wang, and Fischer 2004).

When contempt results in shame, shame reparation cycles are usually triggered. Suzanne Retzinger (1991) and Retzinger and Scheff (2000) suggest when someone is shamed and signals that he has been shamed, the other must acknowledge the shame and try to repair it. If the shame is not repaired, the person who has been shamed will retaliate or withdraw. The shame-repair model describes the following process: (i) the social bond is threatened, usually by some disrespectful behavior; (ii) shame signals disrupt the bonding; (iii) shame is denied (not acknowledged), leading to feelings of alienation and perceptions of the other as attacker; and (iv) anger or withdrawal, depending on cultural tendency, follows as a signal of degree of threat and as means of saving face and perhaps repairing the bond (Lewis 1976). The cycle is exacerbated if the anger or withdrawal signals are ignored. This lack of attention is seen as further disrespect. However, if anger is answered, shame can be reduced and bonds repaired (Retzinger 1991).

While Retzinger's approach assumes that shame is dysfunctional for conflict, Keltner, Young, and Buswell (1997) take a slightly different view, seeing shame as potentially functional appeasement behavior. Appeasement is the process by which we pacify or placate others in situations of potential or actual conflict. A person anticipates aggression, displays appeasement behaviors (apologetic or submissive behavior) that prevents or reduces another's aggression. The use of appropriate appeasement displays may encourage reconciliation because the appeasement displays generate positive emotions toward the appeaser.

6.3 Forgiveness and intercultural conflict

Cultures differ on willingness to embrace and express forgiveness. Watkins et al. (2011) found that collectivist cultures in Nepal were much more likely to forgive than their West-

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ern counterparts. For the Nepalese, forgiveness was necessary to reintegrate transgressors into society. Paz, Neto, and Mullet (2008) assessed forgiveness among Chinese and Western Europeans. Although their initial expectation was that Chinese, as a collectivist culture, would be more prone to forgive, they forgot to consider whether the harm was coming from a member of the in-group or out-group. As a result, they found that, although the cultures were equally likely to forgive, the Chinese had longer-lasting resentment than Americans and felt the offense was more serious when the offender was from the out-group.

Not surprisingly, collectivistic cultures tend to see forgiveness as more than an individual emotion; they see it as a social process. For example, the Maori (the indigenous people of New Zealand) see forgiveness as requiring an explicit interaction that shows commitment to healing the relationship from both the victim and the transgressor. Without this ritual enactment of forgiveness, the relationship remains broken and the harm remains present (Rata et al. 2008).

Similarly, the Hmong regard transgressions as against the family or social group rather than against the individual and, as such, feel the extended family has to be involved in the offering and acceptance of forgiveness (Sandage, Hill, and Vang 2003). In Hmong society, forgiving is related less to the offense than to the sincerity in the emotions and behaviors of the perpetrator following the transgression. The act of forgiveness and the act of repentance has to meet certain standards.

7 Conclusion

Scholars agree that all human emotions contain a cognitive, physiological, and expressive component. Yet this and other universalist notions regarding the nature and communication of emotion shouldn't obscure the fact that culture can have a profound impact. In this chapter, we have explored how the influence of culture extends beyond the experience of emotions such as happiness, guilt, and shame, and also includes both the verbal and nonverbal communication of emotion.

Research shows how language represents cultural differences in the experience of emotion and also how different languages can present challenges in translating emotion concepts, particularly in cases where there is little or no equivalence in the semantic meanings of these concepts. The primary means of emotional communication is through facial expressions, and there are many cultural differences in the display rules guiding these expressions. In addition, cultural scripts can guide the verbal communication of emotional experience as some cultures may be more inclined to exchange high-context rather than low-context messages and to use indirect rather than direct language.

In the final section of this chapter, we illustrated the impact of culture on emotion by focusing on the specific context of intercultural conflict. In this regard, intergroup emotions theory presents a useful way of explaining how group identification can affect the likelihood of destructive conflicts. Specific emotions linked to in-group and out-group bias, such as contempt and shame, play an especially important role in escalating intercultural conflict; and forgiveness, as a response to intercultural conflict, differs among cultures.

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Claudio Baraldi and Laura Gavioli

61 Intercultural mediation

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7 Conclusions
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Abstract: Following increasing migration fluxes and their impact on public service communication in Western countries, research on language and social interaction has drawn its attention to so-called "intercultural mediation", that is, communication in bi- or pluri-lingual settings where mutual understanding is achieved via language interpreting work. It was noted (Wadensjö 1998; Davidson 2000) that communication mediated by a participating interpreter involves complex forms of interaction, allowing participants to mitigate language and cultural barriers. While highlighting that expression and treatment of emotions is a crucial achievement in interpreter-mediated interaction, studies on intercultural mediation, with very few exceptions, have addressed the idea of emotions only indirectly. More precisely, the focus has been on forms of gatekeeping which may block or modify laypersons' emotional expression. As a consequence, gatekeeping has been observed in its function of facilitating institutional achievements and protecting them at the expense of laypeople's voice (including their emotions). Our contribution has a double aim: (a) to discuss those studies which have underlined the relevance of the expression of emotions in interpreter-mediated interactions, in different institutional settings; (b) to highlight the function of mediation in eliciting expressions of emotion and reducing gatekeeping.

1 Preface

Expression and treatment of emotions is clearly a crucial achievement in intercultural mediation; with very few exceptions, however, the literature has addressed the idea of emotions only indirectly. It is the aim of this contribution to bring this idea to the fore. Our study is divided into three main parts. Section 2 defines what is meant with "intercultural mediation" and foregrounds the debate on the topic. Section 3 discusses suggestions from the literature which hint at the issue of emotions in intercultural mediation and highlight

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the significance of studying emotions in intercultural, bilingual communication. The last part of the chapter, from Section 4 onwards, focuses on specific cases of interaction, taken from previous studies, which illustrate the function of mediation in eliciting or inhibiting expressions of emotion.

2 Intercultural mediation: definitions

Intercultural mediation has become increasingly recognized as a third-party intervention directed at mediating between differences in language and cultural background. The concept of mediation derives from conflict studies, where the mediator has the explicit aim of transforming the relationship between two conflicting parties (Bush and Folger 1994), leading them to take a new contextual perspective, helping them find their own solutions to the conflict and reduce the emotional distress it causes by dealing empathically with the emotions displayed in the relationship (Della Noce 1999; Jones and Bokter 2001; Katz Jameson et al. 2010). Although intercultural communication is not conflictual in the same way, the concept of mediation similarly includes the idea that re-contextualizing the parties' perspectives may allow them to appreciate their different points of view (Baker 2006a). What is involved in this case is not the solution of a conflict, but the possibility of overcoming obstacles created by linguistic and cultural barriers (Verrept 2012: 121), including emotional discomfort or uneasiness (Baraldi and Luppi 2015; De Maesschalck et al. 2011; Kale et al. 2011). Since it copes with language difference, translation is considered as a very important component of intercultural mediation.

Against this background, the idea that intercultural mediation basically consists of techniques to mitigate barriers between different cultural perspectives seems reductive for two reasons. The first involves so-called *cultural essentialism*. Cultural essentialism underpins the idea that individuals belong to a specific cultural group and think and participate in communication as part of this group (Spencer-Oatey and Franklin 2009; Ting-Toomey 1999). In this perspective, people's individual behaviour is presented "as entirely defined and constrained by the cultures in which they live so that the stereotype becomes the essence of who they are" (Holliday 2011: 4). While intercultural mediation is expected to provide instruments to overcome cultural barriers and enhance positive intercultural relations, the very idea that there are cultural barriers attributes cultures with predefined characteristics that determine their differences. Mediation is thus expected to deal with barriers created by such predetermined differences. An alternative view sees cultures and cultural identities as fluid, malleable, and contingently constructed in communication (Holliday 2011; Piller 2011); accordingly, intercultural mediation is expected to encourage mutual explication of contingent (cultural) assumptions (Baraldi and Gavioli 2017), not permanent group features or identities.

The second reason accounting for the reductionism of intercultural mediation, seen as a form of cultural arbitration, is that it considers mediating and translating as separate types of expertise rather than distinctive features of bilingual, interpreted interaction. This has, in its turn, two questionable consequences. The first is that of treating intercultural mediators and dialogue interpreters as separate professionals. In situations where institu-

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tions' preoccupation about possible clashes deriving from cultural differences is high, as for instance in the case of healthcare in Belgium or in Italy, interpreting in public services is provided by so-called "intercultural mediators", i.e., professionals, normally from the minority language group, whose main requirement is to deal with those cultural differences which may be involved in the provision of public services (Baraldi and Gavioli 2012). In the interaction, however, interpreting is in fact their major activity and it is thus necessary for this personnel to be appropriately trained. The second consequence is that of conceiving dialogue interpreters as multi-skilled people trying to combine and make sense of a series of separate professionalisms, including that of translator, advocate and intercultural mediator (Leanza et al. 2014). While this idea has been important for highlighting the complexity of a profession which had traditionally been considered not so demanding (much less than conference interpreting, for instance, as suggested in Pöchhacker and Shlesinger [2002: 339]), it does not really account for what takes place in the interaction.

Studies based on authentic conversation instances show that mediation is part and parcel of the interpreting activity. According to Wadensjö, interpreters "cannot avoid functioning as intercultural mediators" (Wadensjö 1998: 75) in that, by promoting mutual understanding, they make it possible to deal with cultural differences. Similarly, in Davidson's view, interpreting is "a form of cross-cultural encounter between immigrants and agents of institutions of the First World" (Davidson 2000: 381). Overlaps between interpreting and mediation are observed in many studies involving professional interpreters (Davidson 2000; Mason 2006; Pöchhacker 2008; Wadensjö 1998). In these cases, interpreters can enhance positive relationships by both preserving cultural differences (Cronin 2006) and bridging values and beliefs between different cultural and speech communities in the direction of establishing new, more open, cross-cultural societies (Angelelli 2004, 2012; Penn and Watermeyer 2012a).

Possibly the strongest theoretical explanation of the intersection between interpreting and mediation is provided by Wadensjö's (1998: 105) concept of coordination. In her perspective, interpreters are active agents who influence and regulate communication, generating a common focus and sustaining the definition of encounters. Coordination occurs implicitly, by providing adaptive renditions of different types, e.g., expanding, reducing or modifying the textual construction of previous utterances, and explicitly, through actions (non-renditions) which focus on the organization of the interaction, e.g., requests for clarification, comments, requests to comply with the conversational order, invitations to start or continue talking. Implicit and explicit coordination construct both interpreting and mediation, including forms of intercultural mediation: original utterances are negotiated interactionally and transformed to allow participants to share understanding and rapport. Coordination clearly involves the participants' expressions of emotions and its empathic treatment.

3 Mediation and emotions: overview of the literature

Emotions have an inner dimension and some studies of intercultural mediation look at emotions as cognitive and personal attitudes, which may be caused by working in delicate

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situations (Leanza et al. 2014; Valero Garces 2015) and may condition the mediators' actions (Angelelli 2004; Bontempo and Napier 2011). In this perspective, the focus is on the interpreter, who has or develops "a cognitive perspective-taking capability [...] along with a degree of other-oriented concern communicated through carefully selected affective displays" (Merlini and Gatti 2015: 154). Emotions are then addressed as an intrapersonal quality generating mediators' feelings of empathy, compassion and appreciation.

Although recognizing the individual dimension of emotions, Merlini and Gatti acknowledge that empathy is first and foremost an *interpersonal* phenomenon, where personal attitudes are handled in communication and where empathy is seen as "a joint activity in which the empathic experience is co-constructed by interlocutors" (Merlini 2015: 36). Similarly, in a study about affect in interpreter-mediated interaction, Cirillo notes that "the complexity [and confusion] associated with the notion of affect lies in its being at the interface between inner states and external expressions" (Cirillo 2010: 58).

The shift from a cognitive to a communicative dimension leads to a shift of attention from the intrapersonal/interpersonal relationship to that between action and interaction, as observed through authentic instances of participants' talk. Merlini (2015), analysing interpreter-mediated conversations, identifies three *empathic communication cues* in mediators' actions: attentive listening cues (feedback tokens), perspective-taking cues (requests of clarification, reformulations, elicitations, expression of understanding/approval, reassurance, encouragement, offering advice), and non-verbal cues (eye contact, facial expressions, gestures). While expressions of emotions are individual, verbal as well as non- or pseudo-verbal actions (as in the case of feedback tokens) make sense in reference to the sequence of actions they start or respond to. Zorzi and Gavioli (2009) for instance show that expressions of empathy, occurring in interpreter-mediated data in both hospital and court settings, make sense insofar as they construct sequences where the participants respond by aligning to others' expressions of empathy. *Disalignment*, or dropping expressions of emotions, would hardly be a manifestation of empathic involvement. Expressions of emotions, moreover, are based on contextual expectations: while weeping is expected and easily accepted during funerals and marriages, it is rather surprising while ordering food at the restaurant.

Settings, both in terms of participants' response to emotional displays and in terms of situational plausibility, have thus a key role in the construction of emotions. Dialogue interpreting, in particular, occurs in institutional settings, so the forms of communication adopted by or encouraged in the institution may make a difference. In healthcare communication, for instance, approaches may vary between "doctor-centred" ones which, roughly speaking, consider transfer of medical knowledge as the sole relevant issue in doctor-patient communication, and the so-called "patient-centred" ones (Mead and Bower 2000). Patient-centred approaches privilege the patients' point of view, and are based on getting information about the patients' lifeworld and their experiences of daily life, which the doctors subsequently "translate into" medical information. Consequently, doctors are responsive to "the patient's emotional state and concerns" (Angelelli 2004: 18) and patients' emotions are thus more likely to be displayed and handled, by both doctors and mediators.

While it is the institutional setting which may favour or inhibit the participants' expression of emotions, bilingual mediators may *align* or *disalign* with an affective orientation of

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the interaction. There are two main aspects to be looked at, in this respect. On the one hand, a concern for conveying information may severely lower sensitivity for emotional expressions, which are in fact held to be absent or occasional in mediation. Studies based on interviews with interpreters show that only few interpreters feel empathic in court settings (Martin and Ortega Herraez 2009) and that, in medical settings, they deal with the patients' lifeworld only occasionally (Greenhalgh, Robb, and Graham 2006). Studies based on recorded mediated interactions show "cold" relationships (Aranguri, Davidson, and Ramirez 2006), absence of lifeworld issues (Leanza, Boivin, and Rosenberg 2010) and reduced affect in renditions (Major and Napier 2012), by e.g., translating affective lexical expression into a neutral register (Gallez and Maryns 2014). Moreover, only occasionally do interpreters engage in small talk with patients (Merlini 2009), show "solidarity" with refugees (Mason 2009) or care for patients (Pittarello 2009).

On the other hand, while the studies above highlight the problem of dealing with emotions in mediated talk, they emphasize the necessity that affective talk is conveyed as such. This may require agency on the part of interpreters, by for instance taking stance in expressing views (Greenhalgh, Robb, and Graham 2006) and emotions (Angelelli 2004; Cirillo 2010; Leanza et al. 2014). Angelleli (2004), in particular, shows that patient-centred (and relationship-centred) communication can be enhanced by interpreters, who can express affect, explore emotions and expand support. Some recent studies, either based on interviews (Kaczmarek 2016) or on recorded interactions (Bridges et al. 2015), show the interpreters' ability in dealing with patients' emotions effectively. Penn and Watermeyer (2012a, 2012b) identify some "facilitatory features" of mediation, which can create "affect dynamics", such as close personal contact, clarification questions, elaboration of information, simplification of jargon, ways of checking, siding for solidarity, expressed trust between participants and small talk.

While a number of studies address the problem of emotions in mediated communication in terms of either institutional choices or mediators' agency in coping with such choices, only a few discuss emotions in relation to culture. One of them, Vargas-Urpi (2013), takes an essentialist perspective and associates specific ways of expressing emotions with specific cultures. The investigation here focuses on interviews with public service interpreters and intercultural mediators. Data show that non-verbal expression of emotions is based on culture and that these culture-bound expressions may be the cause of misunderstandings and conflicts. In communication involving Chinese, for instance, different ways of using laughter and smile, different meanings of lack of eye contact, avoidance of touching and lack of expressive cues make communication difficult. Vargas-Urpi then concludes that mediation should first and foremost solve problems derived from such different behaviour. While allowing for the possibility that people may display their emotions in different ways, Penn and Watermeyer (2012a) reach a different conclusion. They focus on interpreters' agency in enabling the members of a minority "to begin to volunteer emotional and lifeworld information" (Penn and Watermeyer 2012a: 289), thus favouring the interlocutor's appreciation of what is said or expressed and collaboratively enhancing a trustworthy relationship between the participants.

In conclusion, giving emotions appropriate relevance in mediated interaction may involve the mediators' empathic commitment, but, more crucially, their active participation.

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As interaction coordinators, mediators may elicit emotional expressions as well as render them. While provision of information has been seen as possibly clashing with emotional attention, in that it is often given priority in interpreted talk, getting information may be a way of making participants comfortable and reassuring them, as well as enhancing uncomfortable conditions and worries. In what follows, we shall discuss studies that highlight the ways in which mediators' coordination enhances or inhibits emotional expressions together with provision of information. We have selected specific cases showing how emotions are handled and displayed. With two exceptions, coming from studies analysing school and asylum-seeking sessions respectively, our cases are all from the healthcare setting, since most of the literature dealing with emotions in intercultural mediation comes from medical interpreting. We shall highlight forms of intercultural mediation, distinguishing them on the basis of three different interactional achievements: enhancing emotional expressions, formulating emotional expressions and blocking emotional expressions.

4 Enhancing emotional expressions in mediated interaction: cultures and persons

Studies discussed in Section 2 suggest that emotions in mediated interaction are addressed as forms of empathy mainly shown in collaborative constructions of stories of *the lifeworld*. The production of lifeworld stories involves, on the one hand, the actual possibility of laypeople, migrants or members of minorities, to speak spontaneously, in their own words, of their own life, including their problems and worries. Interaction needs then to first allow for the opportunity that these stories are told. On the other hand, empathy and affect are considered to be a result of the interaction, deriving from the interlocutors' contributions reacting to lifeworld narratives. So, in order to be seen as affective or empathic, actions such as talking about the lifeworld, expressing feelings, doubts or worries, need to be *taken up* in the interaction. That is to say, other participants need to align with those actions, treating them as worthy of attention and response. Dropping a participant's expression of worries would most likely stop those worries from being expressed.

In mediated interaction, this may lead to a dilemma on the part of the mediator between (a) rendering and suspending response to the emotional display of one participant (thus risking dropping it) or (b) responding and suspending rendition to the other participant, with a consequent (possible) suspension of the latter participant's response. In most studies where emotions are observed in mediated interaction, the cases illustrate sequences where the mediator responds to an emotional expression directly. This leads to so-called *dyadic* sequences, that is, sequences involving two participants speaking the same language: the mediator and one of the interlocutors. Dyadic sequences have been found by Cirillo (2010) to favour more direct and explicit self-expression, including emotions, by putting temporarily aside the language obstacle (and consequent concentration on interpreting) and leaving the floor open to a more comfortable dyadic interaction.

Dyadic sequences most frequently involve the mediator and the layperson, and may include a response or an elicitation of emotional expressions. In the first extract we show

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here, taken from Baraldi (2012: 308–309), the worried reaction of the patient is occasioned by the news that the doctor will see her again in a month's time, which the patient considers too long. The sequence opens with the mediator's rendition of the doctor's talk. In turn 7, the patient expresses her preoccupation that a month's time before her next appointment is too long. Reassurance is provided in turns 10–12, where the mediator explains that it is good for the patient to be assisted by the same doctor who has handled her case since the beginning and supports her explanation with *inshallah* 'good auspice'.

(1)

01 M bit 'ullik, halla' haliyan in sha' Allah ha tab'i daiman 'ndha.
Then the doctor was saying that, inshalla, she will be in charge of treating you –

02 P Ah
mmh

03 P (??)

04 M wa law 'indik mushkila sihiya (.) mshan shaghlat elkilwa fa mshan hik daiman lazim tab'i ma'a 'tabiba
any problem you have (.) about your kidney, the doctor will be the one who takes care of you

05 P ey.
Yes

06 M rah ''tiki maw'id taqriban ba'd shahr(.) ba'd el a'yad in sha' Allah.
I shall now give you an appointment in a month (.) after the holidays inshallah

07 P barsha shahr.
One month is too long –

08 M la (..) knti habba akthar ya'ni?
No (..) did you think longer than that?

09 P aqal (.) ana dayman bilbit lwahdi w khayfa (.) w l'ecografia
Shorter than that (.) I am alone at home and I do not feel safe (.) and the ultrasound –

10 M in sha' Allah (.) in sha' Allah tatim 'ala khir (.) ana ghult lik ya'ni, hatta bi'i 'ndha li'annu
Inshallah (.) Inshallah everything will be fine (.) I suggested you stay with her because –

11 P Ah
mmh

12 M 'amalti kul el'amaliyat
You underwent the whole operation –

(Baraldi 2012: 308–309)

The patient's expression of worry in turn 7 is thus responded to by the mediator, who not only sympathizes, but also gives the patient's worry attention and provides reasons for proceeding in the suggested way.

Although giving (emotional) space to minority language speakers in medical encounters is not easy, their perspective, including their emotional perspective, may be highly relevant, so mediators' engagement in asking questions about the patients' lifeworld is

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frequent. Here we can see an extract (Penn and Watermeyer 2012a: 280–281) where a very direct question about how the patient *sees* the problem is asked by the mediator (INT) to the patient's mother (PTM). This question (turn 1) enhances the mother's narrative about the emotional causes of the patient's illness (turn 2), which will be afterward reported to the doctor (data not shown).

(2)

01 INT WeMama, ucabanga ukuthi yini edale le-stroke?
Mama, what do you think caused the stroke?

02 PTM Ngiyasola ebehlukumezeke kakhulu emoyeni. Lomuntu ebezwana naye ubemhlukumeza kakhulu impela. Ngoba name ngike ngaba nazo lezizimpawu, nginekhanda lapho ngisemsebenzini, ngaleyo nkathi ngahlukumezekile impela kanti nasemoyeni ngengemuhle kahle ngoba nganginezinkinga nangasekhaya. U-madam wami wathi lapho engiphuthumisa kudokotela kwathiwa ngine-stress, wathi udokotela ngicabangela safuthi.
I think she was disturbed emotionally, her partner was abusing her. Because I also had similar symptoms, a headache once at work and that time I was very stressed and I was not ok emotionally because I had some problems at home. My madam quickly took me to the doctor and the doctor said it is stress, I am thinking too much.

(Penn and Watermeyer 2012a: 280–281)

The two cases above constitute examples of dyadic sequences where a patient's emotional expression is acknowledged and elicited, respectively. The next extract (Zorzi 2012: 236) shows a case where empathy is occasioned during an examination. In maternity settings, compliments to and playing with babies are common during check-ups: here, the doctor and the mediator appreciate the baby's strength and liveliness, aligning to and reinforcing each other comments.

(3)

01 D (bello)!
02 M dai cammi:na! è sve[:glio!
go on, walk! He's a lively one!
03 ? [è svegli[o
[*He's a lively one*
04 D [è mo[lto to:nico.
[*He's very energetic*
05 M [sì sì sì eh eh eh he (laughs) (wake is wake).
[*yes yes yes*

(Zorzi 2012: 236)

Here, the mediator's alignment to the doctor's and nurse's appreciation (turn 2 and 5) and her rendition (turn 5) attribute importance to the doctor's empathic reaction and reassure the baby's mother that everything is alright with her child.

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The last extract we discuss here (Merlini and Gatti 2015: 148–149), is interesting in that it shows the interpreter's coordinative activity inside a triadic interaction. In this case, it is the doctor (S) who solicits the mediator (M1) to speak Russian with the patient in order to make her feel more at ease. In her language, the patient (P1) says she is uncomfortable with the doctor's questions, which provides the doctor with the opportunity to explain the reason why the questions are asked. The mediating activity of the interpreter enhances the patient's emotional expression. In dealing with the patient, the interpreter adds that the patient's competence in Italian is very good (turn 2), but that speaking in her own language may make her feel more at ease (turn 4). This provides the patient with the opportunity to express her complaint. The patient's complaint, which clarifies the patient's disappointment in terms of diverse expectations about the encounter, is then rendered to the doctor (turns 10–14).

(4)

01 S allora vogliamo parlare in russo che magari lei mi si smolla un attimo (.) eh↑
Now, shall we speak Russian so she will maybe relax a little bit?

02 M1 Ты хорошо говоришь по-итальянски
You speak Italian well.

03 P1 mhm mhm

04 M1 Она говорит Хочешь по-русски будем говорить чтоб ты расслабилась и всё
She says, do you like us to speak Russian so that you may relax? That's all.

05 P1 А вот это сейчас зачем вот эти вопросы↑ Надо это всё↑
Now, why all these questions? Is all this necessary?

06 M1 no dice per cosa queste domande↑
She's asking, what's the point of these questions?

07 S no perché=
Well, because

08 M1 =Это такой уголок где стараются женщине дать помощь поддержать
This is a safe place where people try to give women help and support.

09 P1 Да я знаю Я думала я только приду меня только проверит врач Я вот сделаю своё дело и уйду И всё Нет↑
Yes I know, I thought I'd come here, the doctor would simply examine me, I would do what I have to do, and go away. That's all, isn't it?

10 M1 ah perché dice vedi è pragmatica [dice io] pensavo di venire
Because, you see, she is pragmatic, she says I thought I'd come here

11 P1 [((laughs))]

12 M1 a fare l– ((hesitates))=
to have a–

13 S =l'aborto=
abortion

14 M1 =risolvere il mio problema e andare via
to solve my problem and go away.

15 S mhm e invece in Italia c'è una legge per: interrompere la gravida:nza quando non capisci lo chiedi a lei eh↑

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Yes, but in Italy on the other hand there's a law to terminate a pregnancy – when you don't understand you ask her okay? –

16 P1 mhm sì sì

17 S ((clears her throat)) per interrompere la gravidanza che dà la possibilità alla donna di avere un colloquio (.) con un operatore (.) per poter parlare di sé perché si è disperate no↑ quando si è incinta e non si vuole portare avanti una °gravida–° quindi non lo vedere come (.) uno che vuole venire da te e: e ti vuole (.) fare delle domande e:: te ti difendi e dici no non li voglio no↑
to terminate a pregnancy that gives the woman a chance to speak with a service provider, to speak about herself, because one is in despair – right? – when they're pregnant and don't want to carry on the pregnan– so don't take it as if someone came to you to ask you questions, and you are on the defensive and say no, I don't want them, okay?

(Merlini and Gatti 2015: 148–149)

While the patient's disappointment is possibly mitigated in the mediator's renditions, it makes clear that the patient had completely different expectations about the encounter; she thought she was going to have an induced abortion immediately, not a talk. The doctor's reply is reassuring and explicatory in that it clarifies the aims and goals of the encounter.

In this section, we have seen some cases, discussed in the literature, which show interactional dynamics by which emotions are enhanced. The sequences often include forms of dyadic talk, where the mediator suspends rendition briefly and pays attention to the layperson, the patient in those cases. The mediators' coordinative action, based on their choice of suspending rendition temporarily, thus centres on migrants or minority members, showing empathic and affective stances, and favouring the expression of worries, troubles, appreciation and talking of the lifeworld. Mediation may also provide explicit mutual adaptation of cultural assumptions; for instance, in Extract (4), the aims and goals of the service are described as aims and goals of the Italian service. Much more frequently, however, the intercultural dimension goes together with the interpersonal one, i.e., it is expressed by facilitating access to and appreciation of institutional support, for this interlocutor, as a person. This allows for mediation to involve laypeople as *people*, rather than members of minorities.

5 Formulating emotions in language mediation: cultural transformation

As suggested above, dyadic sequences centre on the layperson and may thus favour their emotional expression. This is acknowledged both in the literature and by doctors: in Extract (4), for instance, the doctor explicitly invites the use of the Russian language to help the patient speak her mind. As we have seen, however, emotional actions are communicative when they meet a response and, in mediated talk, responses often come from the

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mediator, the participant who has control over both languages. Rendition of emotions is thus important to achieve responses from the institutional operators. A concept which may illustrate the characteristics of some renditions is that of "formulation". In studies of conversation as interaction, formulations are described as "interpretative" contributions, i.e., utterances that elaborate on what has been previously said: formulations refer to the "gist" of previous utterances; they can summarize, gloss, explicate, develop, or make inferences on that gist (Heritage 1985: 104).

Mediators' expanded and summarized renditions can be considered interpretative contributions in similar ways: they "advance" other participants' utterances, giving meaning to their gist (Baraldi and Gavioli 2015). While analyses of renditions mainly focus on the ways of providing information, it can be observed that formulations may provide information together with affective support, e.g., by reassuring interlocutors or providing them with opportunities to reply (Baraldi 2012; Baraldi and Gavioli 2014, 2015; Gavioli 2012). In the case of renditions of emotions, the gist of the formulation is emotional (Baraldi and Gavioli 2007).

Within the realm of affect and emotion, the concept is particularly relevant because emotions are often communicated between the words and can hardly be rendered by using exactly the same linguistic structure. On discussing a case of mediated interaction, where the English-speaking doctor congratulates the Chinese-speaking mother for the beauty and health of her baby, Hsieh (2009: 144) comments that although the mediator's formulation is different from that of the doctor, it is particularly effective in conveying its gist: the doctor's affective stance and appreciation. Here, we show three extracts, two involving formulations of previous *dyadic* sequences and one showing a formulation of a single doctor's turn. In the first, the mediator formulates a feeling, that is not explicitly uttered by the patient, but constitutes the gist of what she says; in the second, the mediator takes up a couple of words by the patient and explains their gist to the doctor. In the third, the doctor's request is formulated by using reassuring expressions, which make the request accessible and acceptable for the patient.

In the first extract, adapted from a study by Farini (2013: 181–182), the patient provides her last menstruation date, precisely a month before, and adds that the new menstruation has not come yet. The mediator interprets the patient's utterances as a display of preoccupation, which she renders explicitly in line 12: she's a bit worried. The mediator's formulation thus highlights the gist of what she has interpreted to be the patient's feeling and passes it to the doctor for making medical suggestions (e.g., about the opportunity of having a pregnancy test).

(5)

01 M bandma kan aakhr dora shhria lk?
when was your last period?
02 P jtni tlatash mn shhr ashra
It was the thirteen of october
03 M tlatash ashra?
Thirteen ten?

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04 P ai
yes
05 M l' ultima mestruazione è il tredici ottobre
the latest menstruation is the thirteen october
06 D mmh
07 M ora siamo al tredici novembre
now it's the thirteen of november
08 P kant thbt ali kl shhr nisha (.) aldma hbt sar shhr lliom
It comes each month exactly (.) now it's a month today that it's not
10 M mhm
11 P astna tlat aiam oala arba aiam aiati rbma
I will wait three or four days, maybe it will come
12 M ((to D)) ah (.) può darsi che tra quattro o cinque giorni al massimo (.) arriva (.) però (.) lei è un po' preoccupata
Ah (.) maybe in four or five days at latest (.) it will come (.) however (.) she's a bit worried

(Adapted from a study by Farini [2013: 181–182])

The extract below (Baraldi and Gavioli 2007: 166; Farini 2015: 133–134) starts with a doctor's question which shows attention and concern for the patient (turn 1). The mediator's rendition is in two parts, the first (turn 2) translating the doctor's question closely, the second (turn 4) providing an expansion to explain the type of answer the doctor is possibly seeking. The patient's answer comes in turn 5 and will eventually be responded to by the doctor in turn 8. Both renditions, the one of the patient's answer in turn 5 and the one of the doctor's response in turn 8, are formulations focussing on affective aspects. In turn 6, the patient's utterance "I'm frightened" is explained and motivated, in turn 9, the doctor's affective and reassuring reaction "your bell is wonderful" is captured in its reassuring gist: "everything is fine".

(6)
01 D ti volevo chiedere (.) come mai hai la faccia così sofferente?
I wanted to ask you (.) why you look so suffering?
02 M lesh uigihik hek tabaan bain aleki
why is your face so tired?
03 P (??)
04 M fi hagia muaiana mdaiktk fi hagia uiani mdaiik blbit mushkila muaiana
Is there anything wrong that worries you at home?
05 P *[*la (.) khaifa
No (.) I'm frightened
06 D [no (.) mi sembra a me che abbia la faccia sofferente
No (.) it seems to me that she has a suffering face
07 M hh un po' spaventata perché diciamo per la pancia
hh a bit frightened because let's say for her bell

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08 D e:h ma è bellissima la tua pancia!
E:h but it's wonderful your bell!
09 M btul shi tabii btiilik ma tilaii
Everything normal she tells you everything is fine

(Baraldi and Gavioli 2007: 166; Farini 2015: 133–134)

In the two extracts above, the patients' emotions are enhanced by means of mediators' responses in dyadic sequences and then formulated to convey the gist of such sequences, capturing the patients' preoccupations and transforming them into a relevant interactional contribution. Such preoccupations are responded to by the doctor, who in the first case provides medical information (data not shown), in the second responds affectively, an action that is re-formulated, in translation, by making its reassuring gist clear.

The last extract, which we look at below (Baraldi 2012: 314; Baraldi and Gavioli 2015), shows the formulation, for the Arabic-speaking patient (PATf), of a typical, routine doctor's question. The question, which is prompted by a record the doctor is filling out, is about previous miscarriages or abortions the patient may have had. While the doctor's (DOCf) question is direct, the mediator's (MEDf) formulation is cautious and reassuring. The mediator mitigates the directness of the medical request by transforming the question into a possibly sensitive one for the patient, and in so doing she shows her own sensitivity and attention for the patient's perspective. The word *aborto*, meaning both 'miscarriage' and 'abortion', is rendered with 'any pregnancy that did not continue' and the mediator's expansion embeds the doctors' question in a reassuring cultural context, through the expressions "*elbaraka*" and "*qaddar Allah*", both references to God's merciful protection (turns 2, 4). In the following extract HUSm is the patient's husband who participates in the encounter.

(7)
01 DOCf poi chiedi se non ha avuto degli altri aborti (.) delle altre –
Then ask her if she had other abortions (.) other –
02 MEDf mm. ya'ni 'indik elbaraka waladin w halla' elhaml ithalith elbaraka
You have two children, God bless them, and now this is your third pregnancy, God bless it
03 HUSm mm.
04 MEDf ghir hik waqa' haml w ma kamal, [la:w ya'ni ma ikta[mal [la qaddar Allah.
beyond that, was there any pregnancy that did not conti[nue God forbid.
05 HUSm [l:a
[no
06 PATf [la.
[no.
07 HUSm [la.
[no.
08 MEDf no.

(Baraldi 2012: 314; Baraldi and Gavioli 2015)

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The extracts seen in this section show that formulations are used in rendition to capture the gist of previous talk and transform it in ways which meet the affective expectations of the encounter. Formulations in the other language may thus highlight emotional expressions, making communication of emotions in intercultural interaction possible. While only the last extract makes explicit reference to possibly culturally diverse expectations, the other ones interpret feelings which are hesitantly expressed in the bilingual interaction by participants from the migrant, minority group. Similar to the previous one, then, this set of extracts shows that the intercultural dimension of interaction, as far as emotions are concerned, has largely to do with facilitation of access to institutional support. Formulations may occasionally use cultural references as a way of reassuring interlocutors, but such references are treated in the interaction as specific linguistic or cultural enactments of more general achievements, such as clarifying and reassuring. In that they transform interactional contributions into more open, inclusive contexts, they may be considered examples of what Cronin (2006: 28) calls translation as a transformative practice.

6 Blocking emotions in mediation

According to Davidson (2000: 381), mediators work as "informational gatekeepers" of healthcare providers, therefore supporting the difference in power between the First World institutions and the migrants. That is to say, mediators adjust renditions of migrant patients' contributions according to their own ideas of what is relevant, adopting autonomous criteria of selection, and thus increasing the patients' difficulty in making themselves, or their agenda for the discourse, heard. This clearly augments the patients' frustration at not being able to inform doctors. In this section, we deal with examples where interactions are coordinated in ways which do not allow the migrants' emotions to be expressed. We show different ways in which emotions are blocked, ranging from non-rendition of some contributions, to their modifications, to expansions that inhibit rather than elicit the interlocutor's reply.

Let us look at the first extract in this set (Davidson 2000: 396–397). Here, the patient's reply to the doctor's question in turn 1 (how long the patient's sight problem has lasted), provides the relevant details and expresses a doubt about whether the doctor (Dr) actually understood what the patient (Pt) first told him. Although this reply is entirely relevant, the interpreter (Int) skips it completely and insists on the exact period the problem started from. Only the latter detail (provided by the patient in turn 7) is rendered to the doctor.

(8)

01 Dr Ok, right. So:: And how long has it been going on for?
02 Int ¿Y por quánto tiempo le ha venido sucederle esto?
And for how long has been this happening to you?
03 Pt Pues, yo traté de decirle al doctor de de ace más, quatro cinco visitas para atrás
Well, I tried to tell the doctor. More than, four five visits ago
04 Int mm- [hm]

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05 Pt [que] ya me staba sucediendo. Pero:, que no sé si él m'entendiá o no
[that] it was already happening to me. But:, I don't know if he understood me or not
06 Int Pero, ¿hace, ha-hace quándo que le comenzò a, a suceder esto?
But, since,si-since when did this start, to happen to you?
07 Pt mas o meno como un ano, yo creo.
More or less about a year, I think.
08 Int About a year.

(Davidson 2000: 396–397)

In the case discussed by Merlini and Gatti (2015) and shown in Extract (4) above, we had a similar expression of a patient's doubt (why so many questions?). While in that case, the patient's frustration was rendered and made a relevant contribution in the interaction, in the case shown in Extract (8), the interpreter's selective rendition hinders the patient's doubt from being passed to the doctor. By focussing on the detail requested by the doctor, the lifeworld of the patient, which embeds the detail in relevant ways, is ignored.

Mediators seemingly display an orientation to obtaining medically relevant information from patients and conveying it to doctors in an efficient manner, e.g., through summarized renditions. Davidson's extract can possibly be seen as an example of this orientation. Bolden (2000: 414), too, highlights that mediators' summarized renditions exclude patient's talk which is potentially relevant to medical diagnosis and treatment and suggests that this is probably because such talk is "part of a narrative description that presents the patient's medical condition in an experiential, subjective format" (Bolden 2000: 414), which is held to be not relevant. Bolden (2000: 404–405) quotes an example where the patient tells the mediator that the therapy helps a bit, but it "squeezes her head". The latter detail is modified in rendition into "a little headpressure headache" which misses the patient's sensation completely. In the examples we saw in Sections 3 and 4, the mediators modified the structure of their interlocutors' utterances quite a lot, but the patients' emotions were captured by (a) eliciting the patients to express them, (b) rendering or explaining such expressions. In Davidson's and Bolden's examples mentioned here, instead, the focus of mediation is on the medical details and the medical "wording", which shifts the interactional attention onto medicine and out of the patients' experience, thus excluding their emotions.

The last two extracts we show here are from different settings: a school setting (Extract [9]) and an asylum-seeking setting (Extract [10]). They show different ways in which the migrant's emotions are blocked out of the interaction, inhibited or even "mistreated". Extract (9) comes from a study by Davitti (2013) and looks at parent-teacher talks in schools. It shows that, in their renditions, mediators include and handle evaluative assessments, which emphasize the teachers' positive considerations of the pupils. While these expansions possibly capture a reassuring attitude of the teachers, they reduce migrant parents' contributions to the negotiation of solutions for their children's school problems. In the extract below (adapted transcript), the teacher's (T2) long turn, only briefly interrupted by her request to the pupil (CH), is rendered immediately afterwards. In this rendition, the mediator reports the teacher's recommendation lengthily (turn 11). After this, a long silence

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occurs, possibly making the mother's reply relevant. The mother is however not solicited or helped to provide her own contribution and the mediator thus takes the turn again, anticipating the mother's possible concern and preparing the ground "for agreement and affiliation", which becomes conclusive (see turns 12–16).

(9)

01 T2 il problema è che:: (.) non si devono fermare al- alla lingua della comunicazione (.) perché:: (.) cioè devono andare un pochino oltre (.) eh: io capisco (.) cioè io so che per lui è difficile leggere il libro di storia o il libro di geografia: o: ovviam- ancora di più sicuramente l'antologia di italiano (.) però (.) io ho s- ho anche spiegato lui che non è necess- (.) se io ho dato tre quattro pagine da studiare lui può anche studiare due paragrafi (.) o anche solo una pagina (.) però di quella pagina dovrebbe riuscire a capire il maggior numero di parole magari anche con un dizionario (.) ce- hai un dizionario di italiano inglese?
the problem is that they should not stop at the language of communication because I mean they need to go a bit beyond I understand I mean I know that for him it is difficult to read the history or geography textbook obv- obviously even more the Italian anthology but I have also explained to him that it is not necess- if I gave three or four pages to study he can even study two paragraphs or even just a page but of that page he should manage to understand the highest possible number of words also with a dictionary do you have an Italian English dictionary?

02 CH si: [però:* piccolo
[yes but small

03 T2 [ecco
[right

(1.13)

04 T2 eh fa lo stesso (.) capito? riuscire a dire qualche cosa di quell'argomento (.) anche (.) quattro o cinque frasi che però siano attinenti a un argomento di studio insomma bisogna che acquisisca (.) cioè dovrebbero riuscire a acquisire un po' la lingua da studiare (1.12) che è a un livello superiore (.) c- capisco però (.) come in tutte le cose bisogna camminare per gradi
it does not matter right? being able to say something related to that subject even four or five sentences that are however related to a subject of studyin short he needs to acquire I mean they should manage to acquire a bit of the studying language which is of a higher level I understand but as inanything it is necessary to go step by step

(1.55)

05 INT did you understand? (1.1) a little [bit

06 M [poco* poco
[little little

07 T1 ((laughs))

08 T2 ((laughs))

(1.15)

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09 INT because she doesn't (.) of course she knows that he has (.) these problems with
reading and writing
10 M ok
11 INT she doesn't require (.) she doesn't ask him for (.) reading (.) everything and writing everything (.) but if she: says to the others that they should read like three or four pages for her (.) is enough (.) if he just reads one (.) or two paragraphers (.) but he does need to do the least (.) he could do (.) if he doesn't do the least (.) a little bit of an effort (.) then he will never pass (.) to the other level (.) from the communication (.) language to the studying language (.) because now for him it's important that Italian starts to be also (.) a studying language (.) but this he can do it (.) only if he sits (.) at home (.) reads and writes a little bit (.) if he doesn't understand (.) the teacher was suggesting him to use a: dictionary (.) and he has an Italian English dictionary so he could (.) he could help himself. **(5.63)**
12 INT we know that's difficult (.) and (.) but the teacher (.) she's (.) meets him every day and she knows that he's smart
13 M ok
14 T2 ((laughs))
15 INT he just needs to be pushed a little bit
16 T2 ((laughs))

(Adapted from Davitti [2013])

So, while the mother's perspective is possibly clear to the mediator, who reacts by showing understanding (turn 12), the mediator's actions do not seem to encourage the mother to "voice her feelings" (Davitti 2013: 186).

Asylum-seeking settings too offer material to look at the treatment of emotions in mediated interaction. A study by Maryns, for instance, shows a case where the asylum seeker "produces a very well-documented sub-narrative of how he was forced in a brutal way to rape his sister in front of the rebels" (Maryns 2013: 671). The rendition of such emotionally dense narrative, however, (i) reports his experiences in the third person, considerably weakening his involvement, (i) leaves out his direct animation of threatening words, replacing them with an abstract description of the threat, (iii) substitutes his personal perspective with indirect reported utterances, (iv) modifies or even excludes significant details relating to his narrative of physical assault. Thus, the mediator's neutral-objectified rendition of the migrant's narrative, where significant aspects are modified and his account of physical violence is not rendered (Maryns 2013), leads to complete failure in translating the asylum seeker's emotional expressions and involvement, which is obviously crucial in this setting. Extract (10) comes from yet another study of asylum-seeking interviews, with child applicants (Keselman et al. 2010: 95–96). Here the caseworker (C) asks the boy (A) to describe his hometown in detail, presumably as a way of verifying his citizenship. Rather than rendering the boy's answer (a list of street names of his hometown), the interpreter comments the list by saying that these streets' names are very common in Russia and that

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there are streets with these names in all cities. The boy's objection in turn 5 is completely ignored.

(10)

01 C Kan du nämna namn på några torg mankandre och parker?
Can you mention names of some squares, market places and parks?
02 I Какие — нибудь названия в городе площадей, рынков, больщих улиц
Any names of squares, markets, main streets in town?
03 A Ленина, улица Конституции, улица Мира.
Lenin's, Constitution Street, Peace Street.
04 I Det är ganska roligt, det är alltså, det finns i varje stad.
It is rather funny, it is it is in every city.
05 A Что смешного? Это такие улицы названия .. Я ...
What's funny? these are streets their names I ...
06 I Man säger 10 namn och det kan man alltså ... Det är Lenins gata, det är Mirs gata.
One says ten names and one can do so, that is, it is Lenin's street, it is Mir's street

(Keselman et al. 2010: 95–96)

In their discussion of this case, Keselman et al. (2010: 96) comment that the interpreter here positions himself as an expert on Russia and when the interpreter assumes this role, he signals that his expertise might contribute to the caseworkers' assessment. In so doing, however, he disqualifies the details provided without giving the caseworkers access to them, and he completely omits the boy's defensive attempt, treating it as a non-relevant complaint.

By way of concluding, blocking emotions largely coincides with blocking the migrant contributions out and aligning with the institutional majority goals. What is interesting is that this result seems in many ways associated with the mediators' contributions, which impose an essentialist view in two ways: first, in assuming that migrant emotional lifeworld is not relevant in the interaction, second by making assessments on what characterizes a culture, e.g., Russia in the last extract. As we have seen, such an essentialist view is not a requirement in institutional mediated interaction, and there are forms of coordination which make the emotional perspective of the migrant much appreciated. Expressions of feelings, moreover, are a very important contribution in the interaction in that they may elicit the provider's sensitive displays, turning the encounter into a meeting of *people* rather than majority vs. minority, or institution vs. migrant.

7 Conclusions

As the discussion above shows, mediators' coordinative activity is crucial in the enhancement of emotions in intercultural talk and it may encourage or inhibit primary parties' involvement with each other (Cirillo 2010: 72). What seems important is the set of actions

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mediators' contributions orient to, which may give or cut space to laypersons' participation (including their emotional expressions).

Focusing on emotional expressions, in the interaction between migrants and providers, involves looking at mediation as a potential enhancement of *personal* expressions rather than role asymmetries. While asymmetries are obviously relevant in institutional interactions, they may be seen as a problem of distribution of opportunities of personal expression, rather than a problem of power. Displaying (or not displaying) mediators' affect (or empathy) and displaying (or not displaying) migrants' or minority members' emotions and lifeworld issues are intertwined actions in an interactional process. It is therefore important to look at how these actions refer to each other in the interaction, and in which types of sequences they are interlaced. In this view, mediators' actions are *affective* if they are successful in enhancing or formulating the other participants' emotional expressions. The extracts discussed in Sections 4 and 5 show that the mediator's affective action may be responsive (in the case of enhancement of lifeworld issues or emotional involvement) or transformational and inclusive (in the case of a formulated gist). Moreover, these affective actions may involve and address both migrant/minority members and providers. In this view, the positioning of the mediator as a "third person" is evident and the collaboration with the other participants is essential.

Against this background, the difference between enhancing, formulating and blocking is primarily relevant to guiding analyses of emotional expressions in interactional sequences. They do not simply refer to mediators' actions, rather they indicate forms of mediated interactions, in which the participants collaborate in including (or excluding) emotional expressions. Clearly, silent migrants combined with providers who do not show any interest in lifeworld issues, are *collaborating* in blocking emotional expressions. On the other hand, migrants who actively express their emotions and providers who display involvement are collaborating in creating the conditions for enhancement and formulation of emotional expressions. There is, however, no determinism in mediated interactions. Mediators may exclude migrants' emotional expressions alongside providers' involvement, since they are the participants with access to both languages. In this sense, language barriers and ways of coping with them are crucial.

In this contribution it was our aim to show that the intercultural dimension of mediation in the management of emotions is complex and nuanced. Mediation may be achieved either as intercultural adaptation, thus enhancing and formulating (cultural?) ways of dealing with emotions, or as a result of essentialist statements, through which migrant and minority members (and their emotions) are silenced. The possibility to ensure access and understanding of (lay)people's emotional expressions in institutional settings seems indeed crucial in the achievement of intercultural mediation. This implies that *intercultural* adaptation is intended as a synonym of filling gaps between institutions and migrants or minority members (Baker 2006b), independently from the specific features of participants' *cultural* expressions.

Different interactional conditions allowing or inhibiting emotional expressions highlight different ways of coordinating their production, both implicitly and explicitly. Mediation can be seen as a form of coordination reflexively focusing "on displayed intentions, reasons and motives of acting and on the conditions of their understanding and acceptance

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of the meanings that are made clear in this process" (Baraldi and Gavioli 2015: 51). For what concerns the topic of this chapter, this means focusing on displayed emotional motives of acting, and on the conditions of understanding and acceptance of these motives. Further work may involve the exploration of these motives and of the dynamics that may be adopted to render them understandable and acceptable in the interaction with speakers of different languages.

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Caroline Lehr

62 Translation studies, translation practices and emotion

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Abstract: This chapter aims to provide an overview of the role of emotion in thinking about translation. It outlines how emotions have influenced pre-scientific thinking about translation from the Antique period to modern authors and provides an overview of how emotion has been studied in the field of Translation Studies. The chapter addresses both the complexity of translating emotions in texts and the influence of translators' emotions on the translation process. Key studies are reviewed which examine the difficulty of translating emotional language in various sorts of texts, such as literary works or the proceedings of the European Parliament. Subsequently, the chapter outlines experiments with translators that have investigated how translators' emotions can influence performance in this particular language activity, and implications for the professional field and the practice of multilingualism, for example in international organizations, are elucidated. Finally, the chapter will discuss what contribution the study of translation can make to research on language and emotion in the future, considering as well the emergence of machine translation.

1 Introduction

Translation is required in a variety of communicative situations across languages, cultures and modalities (O'Hagan 2019). Throughout the ages, translation has occupied a central role in intellectual and cultural exchange by enabling access to knowledge, wisdom and texts that have shaped humanity through their emotional value and impact, such as the Bible (Siever 2015). Nevertheless, translation has probably never been more widespread than in today's world, where international contact and trade is ever growing (Malmkjaer and Windle 2010). In an increasingly interdependent world, translation is indispensable for overcoming language barriers and makes an essential contribution to the support of linguistic heterogeneity. In international cooperation and institutions, translation allows people to communicate their ideas, opinions and emotions across cultures in the language they choose and feel most comfortable with. Although thinking about translation dates

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back to ancient times, and despite the important role translation has played throughout history, the scientific discipline investigating translation is relatively young. The beginnings of *Translation Studies* as a discipline are most often set with the foundational statements of James S. Holmes (1972), which officially moved the study of translation out of the fields of linguistics or literature studies. Also, the development of Translation Studies as a scientific discipline was driven by the need for a systematic training of professional translators that emerged with the founding of international organizations, such as the United Nations or the European institutions. To ensure a supply of professionally trained translators, general principles by which translation can be explained and predicted had to be established, as well as suggestions of appropriate translation procedures. For example, translation scholars specified that the purpose of a text should guide translation decisions and be given priority over the equivalence of linguistic features, to ensure that the communicative function of the text is maintained in the target language (Nord 1997). Also, quality standards of translation were outlined in the ISO 17100 norm on the delivery of translation services (ISO 17100:2015). This norm defines, inter alia, that translations have to be checked by another translator to maintain high standards of quality. The importance of translation being carried out professionally becomes particularly apparent in emotional situations. As examples, we can easily conceive the dire consequences of medical diagnoses being inaccurately communicated or instructions in a crisis situation, such as an earthquake, remaining unclear.

In the past decades, Translation Studies has grown steadily as a research area, which is also reflected in the growing number of journals dedicated to translation research. The journal *Target* covers the interdisciplinary study of translation phenomena in general and other journals, for example *Translation Cognition and Behavior* or *The Interpreter and Translator Trainer,* focus on specific sub-fields of translation research. By definition, Translation Studies has a strong applied orientation. It sets out to derive research questions from translation practice and to provide input for translator education and professional practice, always maintaining close ties with the professional world of translation. More recently, technological developments such as the improving quality of neural machine translation have had an influence on translation practices and will continue to shape the language industry in the future.

2 What is translation?

The term *translation* comprises different forms of activities. All these activities have in common that they aim to preserve meaning while having to change form and to adjust the message to audiences with a different linguistic and cultural background. They involve the interpretation of the sense of a source message and the production of a target message with the intent of establishing a relationship of equivalence between the two messages (Delisle, Lee-Jahnke, and Cormier 1999: 188). In translation activities, emotions can come into play in various ways. The source message may contain emotional contents which translators need to identify and which may have a strong emotional impact on themselves. Further, translators need to reproduce the message's emotionality in the target language,

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to maintain this crucial aspect of communication. In order to do this, they need to bridge differences between signs and modalities and need to take into account cultural variations in the expression of emotion.

To differentiate between different forms of translation, Jakobson ([1959] 2004) advanced a tripartite definition in which he distinguishes *interlingual, intralingual* and *intersemiotic translation*. According to this definition, interlingual translation or translation proper is an interpretation of verbal signs by means of some other language. Interlingual translation happens across different languages when a message based on a source text in one language is transferred into a target text in another language. This form of translation, transferring meaning across different languages, is probably most often referred to when we talk about translation in everyday discourse. In this chapter, we will focus on interlingual translation as well and will elucidate in a more detailed manner how it relates to emotion. Importantly, interlingual translation has to be distinguished from *interlingual interpreting*, which is concerned with the transfer of spoken messages across different languages. An interpreter listens to a speaker and in real time delivers the same message, including its emotionality, aloud in a different language. As opposed to written translation, interpreting is characterized by a fast processing of the perceived message and an immediate reformulation of the target message (Agrifoglio 2004). Also, interpreting happens in a communicative context that is multimodal and includes prosody, mimicry and gesturing, which may themselves communicate emotions.

Moreover, other forms of translation can play an important role in the transfer of meaning in human communication. According to Jakobson's definition (2004: 138–143), intralingual translation defines the rewording or an interpretation of verbal signs by means of other signs of the same language. This form of translation is frequently encountered in everyday life, for example when we explain certain words to children or paraphrase specialized content for non-specialists. Finally, intersemiotic translation refers to an interpretation of verbal signs by means of a nonverbal sign system and occurs when some ideas that are expressed verbally are translated into images or movement. An example for this form of translation are adaptations of stage plays for opera or dance. In this case, the code of expression changes from linguistic signs to musical sounds or body movements, posing particular challenges and at the same time opening up new opportunities for the rendition of emotional meaning.

3 Emotion in pre-scientific thinking about translation

Early writings about translation were produced by translation practitioners themselves, reflecting on their practice and giving recommendations for translation procedures based on their own translation experience (Munday 2011). Many famous writers, poets and philosophers translated various types of texts and wrote about the phenomenon of translation. Their writings were directed at characterizing the nature of the translation task and at explaining, justifying or discussing their choice of a particular translation strategy. In pre-scientific thinking about translation, individual translators put the emphasis on different aspects of the translation task, depending on their attitudes towards the authors and source

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texts, as well as the goals they had in mind when translating. In their thoughts about translation, emotions were rarely mentioned explicitly, which can be explained by the fact that translators are traditionally supposed to be neutral mediators, disappearing behind the message they convey. When taking a closer look, we nevertheless find that, implicitly, emotions were given significance in thinking about translation throughout history. These traces of emotion and emotionality shall be elucidated in the following.

3.1 From the Antique period to Bible translation in the Middle Ages

Traditionally, systematic thinking and writings on translation are thought to begin in the Antique period with Roman rhetorician Marcus Tullius Cicero (106–43 BC; Seele 1995). Cicero translated classical Greek oratory into Latin and looks at translation through the lens of an orator. Stating that his priority when translating is to preserve the style and force of language, his approach to translation attributes great importance to the reaction of the audience. For an audience's reaction to oratory, the emotions it evokes are crucial, and what Cicero describes as the force of language is highly dependent on the emotional impact words and sentences manage to leave on the audience. In his reflections on translation, Cicero thus already implies that the preservation and transfer of emotional significance is of high relevance in this activity.

Moving on in history, the translation of the Bible was an important event in the history of translation. Translation, in this context, was a means of disseminating the word of God and translating the Bible meant translating a text that was supposed to move the reader in a way that would make the word of God appealing. Moreover, translating religious texts constituted an emotion-laden task for the translator himself and bore a high responsibility towards an author with a particular authority. In the 4th century, Jerome (347–420), who later became the patron saint of translators, faced this challenge and translated the Bible into Latin. His translation of the Bible became known as the *Vulgate* (405; Siever 2015). In his thinking about translation approaches, Jerome distinguishes between the translation of religious texts and non-religious texts. According to him, the former represent the word of God and should therefore be translated more literally, while a freer approach can be adopted for non-religious texts (Vermeer 1992). Jerome's distinction between literal and free approaches to translating later became central to thinking about translation and was further refined and applied to different text types. As illustrated by Jerome's striving to be faithful to the religious text and his author, Jerome's thoughts about translation are dominated by his emotional relation to the origins of the source text and his fear to distort the word of God.

In the 15th century, Luther engaged in the same endeavor and translated the Bible from Latin into German. His translation had an important influence on the standardization of the German language and exemplifies the role translation played in the emergence and constitution of modern national languages in Europe (Lefevere 1977). Luther's *Sendbrief vom Dolmetschen* (1530) is an insightful description of translation practices from which we can also learn about the role of emotion in this activity. Similar to Jerome, Luther emphasizes the importance of the text he is translating and the emotions involved in the process of

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translating the Bible. However, while he seems to be afraid of falsifying the word of God and is aware of the potential dangers associated with altering this sensitive text, Luther also considers faithfulness to his readers a priority in translating. He defends his Bible translation into modern German that was clear and using everyday rather than elitist language by explaining that, to reach his readers, he adapted his language to the way common people usually speak. Although he does not mention emotions explicitly, through an empathetic approach to his readers, Luther is aware that a translation that would stay too close to the original would lose not only its comprehensibility but also its emotional impact on the readership. Similar to Cicero's ideas, Luther's writings on translation deal with the complexity that is involved in translating language in a way that elicits the intended emotions in the audience.

Another main movement of translation in the Middle Ages shows a nice contrast to the priorities Bible translators set in their thinking about translation. If for Jerome and Luther an appropriate reader response was in the center of their efforts, other types of texts required different approaches. In the Toledo School of Translators (1130–1284), scholars were translating scientific texts from Arabic into Latin and later Castilian, to gain access to knowledge in a variety of scientific domains (Pym 1994). In their thinking about translating these factual texts, we find little mentioning of emotional aspects, but rather a focus on other important aspects of communication, such as comprehensibility and making thought clear and understandable in the target language.

3.2 From Leonardo Bruni to the Belles Infidèles

In the Renaissance period, Leonardo Bruni (1369–1444) became one of the most significant and prolific translators. In *De interpretatione recta* ('On the Correct Way of Translating' [1420] 2008), a recognized treatise on how translation should be carried out, Bruni discusses Latin translations of the Greek philosophers Plato and Aristotle. In a rather emotional way, he describes the impact the authors' powerful language has on the translator and how he feels drawn to the expressions he finds in the source texts. Under this impression, Bruni emphasizes the importance of preserving the artistic form of the source language in translation, while also rendering the correct sense. Comparable to Luther and Jerome, Bruni mentions the feelings source texts can evoke in translators because of their authors, content or style and illustrates how these feelings influence the translator's approach and focus.

Contrary views can be found in the Baroque period. During this time, thinking about translation was strongly influenced by the *Belles Infidèles* movement in France (Mounin 1994). In this movement (1600–1720), translators were far less respectful towards the source text than their predecessors in the Middle Ages and Renaissance. Inconsiderate towards the identity and style of the original, they heavily adapted texts in their translations according to what they thought would please the audience. They took the liberty of adapting speech they judged as too rude, deleted words and passages of the original, for example if they contained social criticism, or changed a negative ending into a happy one. Ultimately, these translations were not conveying the same meaning but were creating new texts, guided by a ubiquitous preference for positive and pleasurable feelings and linguistic elegance.

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It seems that the approach to translation of the Belles Infidèles was characterized by their preferences and emotions, which prevailed over the loyalty towards the source text.

3.3 From the Romantic period to modern authors

Later, in the Romantic period, Schleiermacher (1768–1834) wrote one of the most influential theoretical treatises of pre-scientific thinking about translation (Lindemann 2016). His essay *On the different methods of translation* (Schleiermacher 1813) suggested different approaches for literary translation and the translation of pragmatic texts. It demonstrates in a vivid way how important empathy with authors and readers is in finding the right translation approach. Schleiermacher creates the idea of bringing the writer of the source text and the reader of the target text closer. According to him, one possibility in translation is to leave the writer in peace as much as possible and to move the reader towards him by providing necessary clarification. Schleiermacher recommends this procedure for literary texts and calls it *foreignization*. For pragmatic texts, on the contrary, he proposes to adopt the procedure of *domestication,* which moves the author towards the reader by letting the author speak in a way that saves the reader trouble and efforts (Siever 2015). Even when using Schleiermacher's procedure of foreignization, with literary texts that deploy stylistic means and figures of speech, translators often face a central paradox: how can it be possible to transfer meaning while staying close to the linguistic form of the source text? In metaphors, for example, the object or action that is described sometimes cannot be explained through the same comparison across different languages and cultures. Romantic theories of translation suggest that this paradox can only be solved through creativity (Siever 2015) and anticipate the great importance that will later be attached to creativity in the scientific study of translation (Malmkjaer 2019). As we will discuss in more detail in the following sections, emotions play an important role in creative processes and therefore in meeting this core challenge of translation.

While in the Romantic period thinking about translation is at first dominated by optimism about the capacity to solve the number of challenges posed by this activity, later in this period, resignation sets in. In a letter to August Wilhelm Schlegel, Wilhelm von Humboldt (1767–1835) rather emotionally expresses frustration about the task of translating itself and the unsolvable problem of either losing characteristics of the source text or rendering the text in an unnatural way in the target language (Siever 2015). With his credo that every language is its own world, Humboldt's view on translation becomes mainly pessimistic and translating is presented as an endeavor that is impossible to account for both the original and the target language and culture. Modern authors such as Walther Benjamin (1892–1940) later took up Humboldt's perspective and radicalized it based on their ideas of linguistic relativity, assuming that it is impossible to express exactly the same meaning in a different language (Hirsch 1995). Here again, we find that approaches to translation were often influenced by translator's attitudes and emotions, sometimes even in relation to the complexity of the task. Despite or maybe precisely because of this, many fundamental ideas and basic concepts of translation are already outlined in the pre-scientific period and will later reappear and be specified by the systematic scientific study of translation.

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4 Emotion in Translation Studies

Despite the long history of thinking about translation, the study of translation has evolved as an area of research only in the middle of the last century (Holmes 1972). Today, the name Translation Studies stands for a heterogeneous interdiscipline that adapts theory and methods from other disciplines to its own purposes, to study translation in all its complexity (Bassnett 2002). Three major branches of translation research address the phenomenon of translation from different angles. The process-oriented branch focuses on the translation process as defined by Hansen, "as everything that happens from the moment the translator starts working on the source text until he finishes the target text. It is all encompassing, from every pencil movement and key stroke to dictionary use, the use of the internet and the entire thought process that is involved in solving a problem or making a correction" (Hansen 2003: 26). In process-oriented translation research, the cognitive processes and concrete behavior of the translator leading to the completion of the target text are the focus, and emotion is a topic of interest as emotions may influence the processes underlying translators' decisions and strategies.

The product-oriented branch of translation research studies existing translations from a text-based perspective. It compares translated texts with the original one, analyses the translation of different text genres and the characteristics of translated language. The concept of translation quality is central for this research strand. Optimum quality in professional translation implies that a translator provides, in an appropriate amount of time, an accurate and complete rendition of the original that does not distort the original message in denotation and connotation, fulfilling hereby the function of the text in the target language (adapted from Moser-Mercer 2008: 44). In this sub-field of translation studies, emotions are given attention if they are relevant for the function of a text or if intercultural differences in the communication of emotion have to be taken into account for the correct reproduction of the original message in the target language. The third and last branch of translation research studies translation as a phenomenon itself. Its focus lies on what is understood as translation, how translation is viewed by society and how particular translations are received in the target culture (Munday 2011). In this sub-field of Translation Studies, emotions come into play as they determine attitudes towards the phenomenon of translation in general but also towards particular translations.

In the scientific study of translation and its relatively short history, it took a while until emotions became a topic of systematic investigation and, comparable to other disciplines, the recognition of emotion as an essential feature of human thinking and communication is a rather recent development. In the beginnings of the discipline, emotions were rarely in the center of interest of translation scholars. This was certainly linked to the theoretical influence of the classical cognitive paradigm, a paradigm prevailing in many disciplines for several decades and with an emphasis on rational processes in cognition. It may also be due to an unwillingness of this fairly young scientific discipline to link its object of study to what is often perceived as "irrational behavior", as this may appear to run contrary to scientific principles and, particularly important for a discipline with an applied orientation, may also be considered inappropriate in professional life. Some translation scholars, however, did not lose sight of emotional phenomena and provided increasing evidence for

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the vital relevance of emotion for translation. The following seeks to provide a perspective on translation as a process, a product and a phenomenon, under the viewpoint of emotion. Given the heterogeneity of the discipline, this implies a synthesis of research that is rather heterogeneous in background, approach and methodology, reflecting the diverse approaches that exist to studying translation.

4.1 Emotion in the process of translating

4.1.1 Interdisciplinary approaches to studying the translation process

When we translate, we are not only describing an object or activity with different words and carrying across its meaning, we are rewriting an original text. All rewritings are influenced by their authors, who create new understandings of a text and provide different perspectives through which to view it. The process-oriented branch of translation research therefore puts the translator in the focus and studies the translation process from an interdisciplinary perspective that builds on knowledge from the cognitive sciences and psychological research. In Translation Studies, interdisciplinarity has long been a central concept and requirement (Gerver and Sinaiko 1978), and the integration of scientific paradigms and theory as well as the borrowing of methods from various other disciplines has played an essential role in the discipline's history and development. This tendency may be linked to the particular nature of the discipline's object of study, whose purpose lies in mediating between different languages and cultures and thus different perspectives (Thome 2004). Primarily, however, it was rooted in the belief that this fairly young discipline needed to integrate theories that were framed and methodologies that were developed in neighboring disciplines, to account for the complexity of its object of study and to strengthen the discipline's theoretical and methodological basis (Malmkjaer 2000).

Among its different neighboring disciplines, interdisciplinary work in translation research first focused on the closely related fields of linguistics and literary study (Lefevere 1987). Later, in the 1980s, when theoretical consideration was also given to the cognitive processes of the translator as a determining factor in the translation process (Seleskovitch and Lederer 1984), this shift entailed an increasing interest in psychological research. Scholars started to investigate the translation process empirically and experimentally to obtain insight into the mental processes that underlie this complex cognitive activity, and several models of the translation process were developed (Hönig 1995; Padilla, Bajo, and Padilla 1999). In accordance with the cognitive sciences and psychological research, the first dominating paradigm in translation process research became what today can be considered the classical cognitive paradigm, with its emphasis on rational processes, regarding the human brain as a symbol-processing system and imputing computational functions onto cognitive processes (Barber 1988). While this paradigm allowed for an understanding of the basic elements and regularities of the translation process, it devoted very limited attention to the subjective experience of the world that accompanies and influences human thinking, such as emotion. In recent years, however, empirical evidence has been provided for the important role that emotion plays in the process of translating. Based on this empiri-

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cal evidence, the following provides a perspective on translating that elucidates how emotion can have effects on translators' information processing and decision-making during the translation process.

4.1.2 Emotional stimuli in the translation process

In the translation process, the text that is translated is of central importance and, as was already mentioned in the preceding sections, it is an important emotional stimulus. Emotional responses to texts, both when reading and when translating, have to do with emotional responses to the text's content and style and with learning things about the emotions of people present in the text (Blanc 2006). Texts refer to extra-linguistic persons or things in the real world, and the reader then refers to these realities, codified linguistically in a way that is modulated by the intention and emotional attitude of the author. As, during reading, knowledge about these realities is accessed in memory, emotions related to this knowledge are activated, reminding us of our own experiences (Schwarz-Friesel 2007). In the practice of professional translators, the contents of a wide range of texts have the potential to provoke such emotional responses, ranging from humanitarian reports to legal documents. In addition, emotional reactions to texts can be related to aesthetic responses, for example when translating literary texts. Accordingly, Kneepkens and Zwaan (1994) distinguish two types of interrelated and overlapping emotions that are elicited in text comprehension: *fiction-emotions* and *artifact-emotions*. Whereas fiction-emotions are represented at the level of the situation model of the text and are linked to the contents, the protagonist, and the course of narrative events, artefact-emotions are elicited by the surface structure of the text and are directly derived from the way the text is written, for instance from the text's style or rhythm. If a text is unclear, faulty or not well formulated, however, artefact-emotions may also be negative. For example, as well as being moved by the fate of a person described in a narrative, a translator could get angry because of the poor style of a text.

Apart from text-related emotions, the translation process can also be influenced by emotions rather unrelated to the decisions at hand and elicited through other stimuli or events which are present in the translation situation (Durieux 2007). This will be illustrated in the following. In today's professional practice, translators are embedded in complex workflows and networks in which they are collaborating with multiple other actors. Translators usually receive the translation from a commissioner or, when larger volumes of texts are translated, from the project manager. At this stage in the workflow, they negotiate the time frame of the translation job and may request additional background information on the source text, to better understand the communicative situation and advise the client. During the actual translation process, translators then closely work together with colleagues who, for the purpose of quality assurance, revise their translations and provide feedback, which is then incorporated into the final version of the translated text. Once the finalized translation has been delivered to the client, translators remain available for questions, explanations or to validate translated texts in their final formatting. Hence, their professional practice involves communication with clients or colleagues as well as perfor-

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mance assessments, for example feedback from revisers. These communicative processes need to be managed and are prone to elicit emotions of all kinds. Moreover, other factors, such as time pressure, irritating features in the language tools that translators use or the societal status of machine versus human translation can impinge on the translator's professional practice (Ehrensberger-Dow and Massey 2019) and invoke positive and negative emotions. Hansen (2006) explains with reference to Damasio's (1994) research that "be it in connection with [...] some themes or words, impulses in the form of images, experiences, associations, and emotions immediately emerge and influence the process and the decisions during the process. During the act of translation, emotions and earlier experiences [...] are activated and these have an impact on the actual decisions" (Hansen 2006: 76).

4.1.3 Influences of emotion on translators' decision-making and translation performance

One of the first empirical studies, aiming to "shed light on the affective side of translators' decisions", was conducted by Tirkkonen-Condit and Laukkanen (1996: 45). They analyzed evaluative statements of professional translators in think-aloud protocols and compared differences between routine tasks and non-routine tasks. Based on their observations, they explain that "in a feeling of security" (Tirkkonen-Condit and Laukkanen 1996: 50) in the routine task, the subject was more likely to assume the role of a communicator (Tirkkonen-Condit and Laukkanen 1996: 56) and detach herself from the source text. Tirkkonen-Condit and Laukkanen's findings provided insightful exploratory evidence, indicating that key aspects of performance in translation, such as detachment from the source text and idiomatic, audience-oriented reformulation, may be emotion-sensitive.

Acknowledging the potential significance of emotion for the translation process as well as the resulting product, Lehr (2014) conducted a larger-scale empirical investigation into the influences of translators' emotional states on decision-making. Her two-phase study involving 42 professional translators builds on the assumption that emotion may influence what people think and how people think, through its effects on the way information is processed. The first phase of her study focused on the former influence, studying a relation between fiction-emotions and the emotionality of a translated text; that is, the text's potential to prompt an emotional response. Based on the idea that this relation could be explained through emotion-congruence effects (Niedenthal, Halberstadt, and Setterlund 1997), translations from translators who had themselves experienced a more or a less intense emotional response to the text were rated for emotionality by readers and compared. Emotion-congruence effects rely on the assumption that emotion becomes a strong cue or prime for information that is associated with its experience and, as a consequence, during an emotional state, ideas and events that have been associated with the emotion are activated, their processing is facilitated, and they are more likely to be used in information encoding and retrieval (Forgas 1995).

The study did not find any evidence in support of the assumption that the emotional response of the translator influences the emotionality of a translation, rather indicating that more controlled language processing, such as professional translation, may be subject to other processes, for example intentions to overcome a bias. Nevertheless, in the influen-

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tial *Interpretive Model*, based on the idea that all translating underlies the identification of sense and its re-expression, Lederer (2003) considers the translator's emotional reaction to the text a prerequisite for the translation of the text's emotionality. She argues that the emotionality of the text can only be translated if the translator feels the emotion of the text and experiences its "affective components" (Lederer 2003: 50). Presumably, both the identification and re-experience of the emotion of a text, and the controlling of one's emotions if they are too intense or interfering with the correct transfer of meaning, are part of being a good translator.

In the second phase of her study, Lehr (2014) examined the influence of emotional responses to positive and negative feedback on translation performance. Positive and negative affective states have been associated with different processing styles. As negative emotions are supposed to function as a warning signal, indicating that the environment is threatening and that these concerns must be addressed, individuals become more motivated to identify, alleviate, or eliminate the problem, resulting in increased attention to the details at hand and a more analytic, systematic processing strategy (Bohner and Schwarz 1993). Conversely, positive emotions signal that the environment is safe and promote creative processing as well as a tendency to explore, through broadening people's momentary thought-action repertoires (Fredrickson 1998). To examine the effects of positive and negative emotions on translation performance, Lehr compared translation evaluations by experts for accuracy and creativity. The comparison showed higher ratings for aspects of creativity in translation, such as idiomatic expression and stylistic appropriateness, in the group that had experienced positive emotions, and higher ratings for correctness of terminology after negative feedback, a criterion that can be attributed to accuracy in translation. Similar tendencies had already been observed by Tirkkonen-Condit and Laukkanen (1996) and were later reported by Rojo and Ramos Caro (2016). To date, the above studies suggest that, in professional translation, positive and negative emotions of translators can have an influence on particular aspects of accuracy, fundamental for all translation activity, and creativity, which is necessary at certain points in the text to varying degrees, depending on the degree of non-literalness that is required.

More generally, other studies showed that the willingness to take risks in language choices (Pym 2005), stress under time pressure (Hansen and Hönig 2000) and translators' uncertainty with respect to their understanding of the source text (Angelone 2010) were not only influencing behavior and usage of reference tools during the translation process, but also translators' decisions about how to translate words and phrases of the original. These findings seem to corroborate that, as Chesterman (2002) put it, translators' emotions are a causal factor in translation that influences translational choices and, as a consequence, the translation process and translation performance. Moreover, Lehr's (2014) results indicate that the influence of emotion may be particularly remarkable in instances when there is a need for something "on top" of the basic routine processes, for example very careful scrutiny for terminology or finding a particularly idiomatic formulation. Effects of emotion may thus be particularly impactful when the task becomes increasingly difficult and translators cannot draw on routinized solutions. Also, her results indicate that decision-making in professional translation may only to a certain extent be susceptible to emotion effects, and that emotion effects in the translation process may be subject to routine

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procedures and other controlled processes, for example motivations to be accurate. How emotions can have both a promoting and limiting influence on translation performance and how strong the effects are no doubt depends on numerous variables that remain to be further investigated. In line with this conclusion, translation process research has in recent years increasingly taken into account that humans differ from mere processing devices in that they are emotional creatures, and interest in studying the affective side of professional translation has grown steadily.

4.2 Translating emotions

4.2.1 Emotion and reader response in theories of Bible translation

Before the processes underlying the translator's choices increasingly awakened the interest of translation scholars in the 1980s (Seleskovitch and Lederer 1984), for a long time in translation theory, the translator had been merely present through translational choices that were manifested in the translated text. Greatly influenced by linguistic approaches (Catford 1969), in its beginnings, research on translation adopted nearly exclusively a textual perspective, by comparing source and target text and analyzing the translator's choices on a linguistic level and their implications for the relationship of equivalence between the two texts (Newmark 1988). In this product-oriented, text-based strand of research, some scholars became interested in the role of emotion in translation already at a very early stage of translation theory.

Nida and Taber's *Theory and Practice of Translation* (1969) was one of the first scientific attempts to assist the translator by providing systematic suggestions of translation procedures. In their theory, which was oriented towards Bible translation, Nida and Taber moved beyond semantic and syntactic considerations and, similar to their famous predecessor Luther, included pragmatic ones that account for implied meanings. They considered that, in the context of Bible translation, the emotional reaction of the reader takes center stage and explicitly granted emotion an important role in reader response, as illustrated by their definition of message as "the total of meaning or content of a discourse, the concepts and feelings which the author intends the reader to understand and perceive" (Nida and Taber 1969: 205). According to Nida (1969), fully translating a message involves three tasks: the analysis of the meaning of the source language, including its emotive meaning, the transfer of the analyzed text from source language structures to target language structures, and the restructuring of the target language in order to make the text acceptable in the receptor language and to achieve the appropriate response in the reader.

Moreover, Nida generally acknowledges that for the translation of emotionality, the connotations of words are of great relevance. Osgood, Suci, and Tannenbaum (1957) measured the connotative meaning of words, using the semantic differential technique, which asks people to rate words on a scale anchored at two bipolar adjectives. They postulated that this meaning space can be accounted for by three major dimensions: valence, which is the degree of pleasantness of a word's content; arousal, which is the emotional intensity provoked by the content of a word; and potency, the degree of control exerted by it. Words

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that are apparent equivalents in two languages can differ on these dimensions and, as a result, have different connotations. As other languages and cultures may connect different feelings with a word, these variations have to be taken into account when translating, to elicit the intended emotive response in the reader of a translation. In user-centered translation, information about characteristics of target text readers is gathered and guides translators' perspective-taking when imagining the emotional reaction of the audience. More specifically, translators use fictive archetypes of users based on empirical evidence, for example on age groups or differences between geographical areas, or they consider features that can be found in the text, such as how the writer addresses the reader, to imply information about the reader (Suojanen, Koskinen, and Tuominen 2015).

4.2.2 The relevance of emotion for functionalist approaches to translation

Not only when translating the Bible can emotional responses play an important role in text perception. In contemporary translation theory, a highly influential strand are so-called functionalist approaches to translation (Nord 1997). These theories are based on the assumption that texts are produced and received with a specific purpose. Therefore, the starting point for translation, which guides the translator's approach and focus, is the purpose of the target text (Schäffner and Wiesemann 2001). Functionalist approaches situate the text in a communicative and cultural context and attach particular importance to all aspects that are relevant to achieve the text's purpose in the target language and culture. To varying degrees and depending on the text type, emotions can be relevant to maintain the function of a text in its translation. Advertising texts, for example, often achieve their goal to encourage consumption by triggering particular emotions in the reader. The translated text then has to fulfill this emotional purpose in the target culture. To preserve the text's impact and impression, a high degree of cultural awareness is required and the translator's strategy can go beyond the actual linguistic translation of the text and necessitate an adaptation to the target culture and market. This form of text localization is less bound to the source text and can involve the creative transfer of idioms, imagery, word plays or rhymes (Cruz-García 2018) which communicate the intended affective meaning in the translation.

4.2.3 Attenuation of emotion in the translation of literary and pragmatic texts

In addition, fiction-emotions and aesthetic emotions play a key role in the experience and interpretation of literature (Lombardo, Saetre, and Zanetta 2014). In literary works, changes and shifts may have a particular impact when they concern emotive language. For example, Coromines i Calders (2010) compared the anger-like feelings in the novel *Unkenrufe* by Günter Grass between German as well as Spanish and Catalan. She argues that Grass' masterpieces are particularly relevant examples of the emotional dimension of a literary text, since they usually show a strong relationship between the emotion that is experienced by the protagonists and the macrostructure of the novel. Based on her analysis, Coromines i Calders (2010) comes to the conclusion that while in the Catalan translation, the same

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intensity of anger-like feelings seems to be conveyed as in the German original, the Spanish translation shows some attenuating changes. As expressions such as *verdammt* become *maldita sea* (Coromines i Calders 2010), the narrator in the novel conveys less intense anger feelings, and the reader has a less negative view of the fictional world. Readers of the Spanish translation thus might not look upon the characters as negatively as readers of the German source text, and as they follow the plot, the degree of suspense could be lower.

In a different context, the translation of emotive language has also been studied by Rega and Magris (2008). They focused on debates of the European Parliament in which emotions are expressed to reinforce the speaker's ideas and to be convincing, sometimes used as strategic means without accurately mirroring the experience of those who express them. Based on their analysis of interventions of German- and Italian-speaking delegates in the proceedings of the European Parliament from 2007, they conclude that the translation of emotional impact does not only depend on words but also on the indirect expression of emotion through rhetorical emphasis and semantic prosody. Complementing Coromines i Calders' (2010) observations, Rega and Magris find that in the translation, sometimes the emotional intensity of expressions is attenuated and may not have the same impact on the listener or reader. For example, while an emphasis is created through an entire separate sentence in German with *Das ist sehr schockierend*, the Italian translation only integrates *scandalose differenze* into the preceding sentence structure, thereby lessening the intensity of the expression.

4.2.4 Cultural differences in the expression of emotion

Literary or pragmatic, emotional experience is central for many texts. Evidence from psychological research suggests that emotional stimuli are given priority in information processing (Schacht and Sommer 2009) and the abovementioned examples illustrate how much readers can infer from the emotionality of a message and how central the description and expression of emotional experience is for a text. However, we have also seen that translating emotive language presents special challenges, and that shifts can occur in translated texts. Translating emotional experience is complex because the conceptualization and expression of emotion differs across languages and cultures. Each language conceives and organizes the lexical grid of emotion in a different way (Wierzbicka 1999), and emotion words that seem to be equivalent across languages can still differ in important nuances, such as the intensity they convey. In addition, situations that give rise to a particular emotion in one culture would be labeled with a different emotion word in another. For example, one dimension of cultural variability that has been studied in emotion research is the difference between individualistic and collectivistic cultures (Hofstede 1983). Empirical evidence suggests that emotional experience is centrally mediated by how people define themselves and their relation to others in their environment (Mesquita 2001). In individualistic cultures, such as the US American, French or German culture, tendencies have been found for the independent self to be emphasized and self-expression and pursuit of individuality to be encouraged. By contrast, collectivistic cultures, such as the Chinese, Russian or Spanish culture, are thought to be rather characterized by a self-construal based on

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interdependence. The latter is considered to favor thinking of people as being interconnected to one another and rather endorses the maintenance of social harmony and one's belongingness to a group (Markus and Kitayama 1991).

When translating emotions, translators need to be aware of these different tendencies to comply with cultural conventions and to assure successful and smooth communication. As an example, cross-cultural differences have been reported as to how individualistic and collectivistic cultures assess the emotion of pride (Ogarkova, Soriano, and Lehr 2012; Stipek, Weiner, and Li 1989). While in individualistic societies, personal achievement is a valued and socially rewarded goal and its overt manifestation is more acceptable, in collectivistic societies, self-esteem is thought to strongly depend on social harmony. The expression of pride is therefore generally more accepted and expected for an achievement that benefits others and not merely the individual. Due to the personal pride attenuation of collectivistic cultures, in languages such as Russian or Spanish, the most frequent labels found in emotional scenarios reporting personal success refer to mere satisfaction, whereas in English, French and German, the emotional scenarios reporting personal success are more often labeled by pride words. All of the above languages are official languages of international organizations, such as the United Nations or the European Institutions. Translators working in the large translation services of these organizations use and translate these languages every day, sometimes in diplomatic contexts where nuances can be decisive. They apply their awareness of intercultural differences in the expression of emotion to transfer emotional meaning without irritating the audience in the target culture. Given the differences in the conceptualization and expression of emotion across languages and cultures, translating emotional meaning can represent an enormous challenge. Although as professional communicators, translators are able to ensure interlingual communication, it may not always be possible to maintain all aspects of emotional meaning in a translation.

4.2.5 Are emotions translatable?

In view of the above, should we ask the question if emotions actually are translatable? Different emotion theories provide different potential answers to the question after the translatability of emotion. Basic emotion theories (Ekman 1999) focus on a set of emotions that they consider biologically and physiologically basic, such as fear, anger and joy. These theories would assume that basic emotions lead to a universalistic behavioral expression across cultures and thus also to the verbal labeling of the emotional state with a particular emotion word, whose meaning would be relatively stable across languages. Because of their universality, basic emotions should be rather easy to translate, and labeling an emotional state in another language would not change the emotional experience. This view would be rejected by the social constructionist approach to emotion (Feldman Barrett 2006), which assumes that language essentially shapes how we perceive and categorize an already existing reality and thus also the perception and experience of emotion. According to the assumptions of the latter theories, labeling an emotional state in another language should always lead to a different experience due to the constraints of word meaning, and the successful translation of emotion seems hardly feasible. The truth probably lies some-

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where in between these two theoretical views, as is demonstrated by the work of the numerous professional translators who are translating emotional content every day. It is part of their expertise as intercultural mediators to analyze the communicative situation and to know how to get the emotional meaning or at least its most important aspects across in a different language, so that people with different language backgrounds can communicate and share emotional experiences.

4.3 Emotion in the perception of translation as a phenomenon and new technological developments

The third branch of translation research studies translation as a phenomenon itself and focuses on what is understood as translation and how translation is viewed by society (Munday 2011). In this branch of Translation Studies, emotions are relevant as they determine attitudes towards translation and those can have a range of implications. They influence the status translators have in the professional world and, for example, the degree to which they are consulted for and integrated into multilingual text production workflows. Also, the way translation is regarded by society has an impact on its status as a good and how much society is willing to pay for this service.

Ehrensberger-Dow and Massey (2019) point out that new technological developments which have become more and more relevant in the context of translation impinge on its societal status. More recently, developments in language-related artificial intelligence and ready access to freely available online tools have led to new practices in multilingual communication. A new level of quality of neural machine translation has had profound effects on the availability of translation as well as the use of it for the wider population. With instantly translated texts only being a click away, attitudes towards translation have changed as well and translation is increasingly perceived as a simple, straightforward process and freely available service. What the casual user may not realize, though, is that today many machine translation systems still produce output with errors, ambiguities and culturally inappropriate content. A careless attitude towards translation can thus lull people into blindly trusting flawed translation output that could contribute to risk and even result in legal consequences (Wahler 2018). To address these problems, the concept of machine translation literacy has emerged (Bowker and Buitrago Ciro 2019), which has to do with allowing people to make informed choices about the deployment of technology and includes knowledge about the capabilities and limitations of machine translation tools. As the digital transformation progresses, machine translation literacy can contribute to ensuring that society views language-related artificial intelligence in a positive but realistic way, and that translation is perceived as a valued phenomenon that requires both technological and human expertise.

4.4 Translation and emotional intelligence

How emotion influences translation in various ways and how strong the effects are no doubt depends on numerous variables. One of the factors that determine emotion processes

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are inter-individual differences. These differences between individuals in the capacity to understand, identify, utilize and regulate emotions (Mayer and Salovey 1997) have been described with the terms *emotional intelligence* or *emotional competences*, defined as the ability "to optimally use the emotion mechanism as it has been shaped by evolution" (Scherer in Sander and Scherer 2009: 92). Evidence is pointing to the crucial role emotional competences play for all spheres of life, such as general well-being, job performance and adaptability to changing conditions (Nelis et al. 2011). In the preceding sections, we have already established that translators are supposed to identify emotions in texts, express them in a culturally appropriate way, regulate their emotions with respect to texts and authors, and use emotions to elicit particular responses in the text's audience. More recently, emotional competences have also received increased attention from the professional world of translation (Career Resource Centre Team, United Nations 2015) and their importance is illustrated by the core competences for translators defined by the European Master's in Translation (EMT) (EMT Network, European Commission 2017). Published by the translation services of the European Commission, the EMT is one of the leading reference standards for translator training and translation competence in both academic circles and the language industry. For translation professionals that fulfill the requirements for employability of the European Institutions, it defines the five areas of competence shown in Figure 78.1.

The competence framework of the EMT highlights the key role that emotional competences play in professional translation and how inter-individual differences in these competences can determine translators' performance. The first competence area *language and culture* encompasses "the general or language-specific linguistic, sociolinguistic, cultural and transcultural knowledge and skills that constitute the basis for advanced translation

Fig. 62.1: Competence framework of the European Master's in Translation, European Commission (2017).

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competence" (EMT Network, European Commission 2017: 6). A high awareness of cultural conventions when it comes to the expression of emotion are a vital aspect of this competence. Further, the *translation competence* lies at the heart of the competences defined by this framework and includes strategic, thematic and methodological competences that are important for meaning transfer in translation. Identifying emotions in texts and understanding their role for the text's communicative purpose can occupy a central role in this competence area. More recently, the *technological competence* has gained importance in the EMT-competence framework. It comprises knowledge and skills required to use technologies, adaptability to new conditions and self-motivation to learn new skills. In a profession that is undergoing constant change due to technological progress, these skills are of crucial importance and they are greatly facilitated in individuals who are able to identify and up-regulate negative emotions, such as uncertainty. In the *personal and interpersonal competence*, the relevance of emotional competences is readily apparent as these competences include managing stress, working in teams and continuously self-evaluating and developing competences through personal strategies and collaborative learning. In a similar vein, the *service provision competence* includes communication and negotiation with clients, communicating with colleagues for project organization and complying with ethical codes and standards. As the aforementioned skills strongly depend on emotional competences, such as emotion regulation, they illustrate how centrally important emotional competences are to professional translation in today's working world.

This conclusion is empirically supported by Hubscher-Davidson (2018) who, in her study, found several interesting correlations between emotional competences and translation performance. She reports tendencies that emotion regulation skills are positively associated with the acquisition of literary translation experience and suggests that translators may develop their emotion regulation skills through literary translation work and the emotional aspects it involves. Hubscher-Davidson argues that the more they translate literature, the more translators engage in multifaceted emotional experiences and have opportunities to improve the way they handle these. Her results might have interesting implications for language classes in which translation exercises could be suitable to train emotion regulation and, one could assume, also other emotional competences that are required for translation, such as empathy and perspective-taking.

Further, Hubscher-Davidson finds a trend for translators' job success to be positively associated with trait emotional intelligence in emotion expression. In an attempt to integrate situational and personality-related affective aspects of translation performance, Hubscher-Davidson proposes that one could explain this result through the relation between positive emotions and creativity, addressed by other studies in translation process research (Lehr 2014; Rojo and Ramos Caro 2016). She points out that as individuals who are capable of expressing their feelings to others tend to experience more positive affect, which is conducive to a more creative processing style, these translators may have more instances of creative expression and be able to produce more translations of a higher quality. Her explanations demonstrate that situational and personality-related affective aspects are closely interlinked and that both play an important and influential role in translating.

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5 Summary and future perspectives

In this chapter, we have outlined how emotion has influenced thinking about translation since its very beginnings. In the pre-scientific period of thinking about translation, famous writers, poets and philosophers have already been aware of the importance of emotion for successful communication and the complexity of transferring emotional meaning into another language and across cultures. Their approaches to translation were often characterized by their own feelings and, in the last decades, the scientific study of translation has provided empirical evidence for the impact emotion has on translators' performance and how it is linked to crucial aspects of translation quality, such as creativity. While in the last decades, Translation Studies has been mainly dominated by the approach of Western science, in recent years, activity in translation research in China has risen and has become an important contributor to this research field. When continuing to study the role of emotion in translation, it will be important to devote increasing attention to Chinese perspectives in this growing area within Translation Studies.

Many new questions are raised by recent advances in language-related artificial intelligence. Can machines translate emotions in the same way as humans can? Are emotions a uniquely human feature that will play an important part in defining what machines can do and what humans have to do, to ensure successful communication? To answer these questions, a new type of translation product, machine translation output, needs to be studied under an affective perspective. In addition, post-editing of machine translation output has become an integral part of translation work and differs from translation in that it includes revising machine-translated texts instead of creating a translation from scratch. What are the emotional differences between translating and post-editing? Can translators still grasp the emotionality of a text in the same way as they did before? Creating a better understanding of the impact of machine translation on human cognition and communication, including its affective aspects, will constitute a major research agenda for translation research in the future.

In a globalized and increasingly interdependent world, the language industry is ever-growing and Translation Studies should further investigate the role of emotion in all forms of multilingual communication, in the practice of multilingualism and the training of language professionals. In doing so, research in this field can make a relevant contribution to the study of language and emotion. As a complex, situated communicative process, translation provides a meaningful way to learn about the relation between emotion and language. It offers an insight into how emotion shapes ecologically valid communication processes which involve two languages and cultures and which will undergo intriguing developments as digitalization progresses.

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Ludmila Isurin and Hope Wilson

63 First language attrition in bilingual immigrants

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Abstract: This chapter provides an overview of studies on first language (L1) attrition in immigrants. It discusses the interconnected nature of language attitudes, sense of self, and potential emotional connections to the first language as exhibited by first-generation immigrants in a variety of socio-cultural and linguistic settings. The majority of studies on L1 attrition look into various sociolinguistic and psycholinguistic variables that might account for better maintenance of L1 in bilingual immigrants. Among such variables are the immigrants' language attitude, their self-perception/identity negotiation, and their emotional connection to the native language, country, and culture. Thus, each of these variables – individually and in interaction with other variables – is discussed in this chapter. In addition, the level of the emotional connection with the native language and country in immigrants often defines the language transmission between generations. While the extensive discussion of studies on heritage speakers remains beyond the scope of this overview, the importance of looking into the connection between the emotional factors in the parents' attitudes towards their L1 and how the language is preserved in the family adds an additional angle to the discussion.

1 Introduction

Immigration is a life-changing, and often traumatic, event in an individual's life. Leaving behind the native country, with its familiar culture, language, and values, immigrants face the daunting prospect of a "rebirth" in the unknown and often intimidating world of their host country. Their sense of identity and emotional attachment to everything "native" will be put to a test, as will their ability to master a new language. With their distinct accents and their mixed identities, they will be perceived by others and perceive themselves as people caught between two countries, two separate lives, and two languages. They will

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have to grow accustomed to answering this same question again and again: Where are you from? Yet that is not just a question posed by others: sometimes that question also comes from within. The powerful quote below captures the emotion wrapped up in the fact that any individual must face upon moving to a new country: Trying to achieve a full mastery of a new language, immigrants often suffer the deterioration of their native tongue.

> Not to speak your own mother tongue. To live with sounds, logics, that are separated from the nocturnal memory of the body, from the sweet-sour sleep of childhood. To carry within yourself like a secret crypt or like a handicapped child – loved and useless – that language of once-upon-a-time that fades and won't make up its mind to leave you ever. You learn to use another instrument, like expressing yourself in algebra or on the violin. You can become a virtuoso in this new artifice that provides you with a new body, just as false, sublimated – some would say sublime. You have the impression that the new language is your resurrection: a new skin, a new sex. But the illusion is torn apart when you listen to yourself – on a recorded tape, for example – and the melody of your own voice comes back to you in a bizarre way, from nowhere, closer to the grumble of the past than to the [linguistic] code of today [...] Thus, between two languages, your element is silence. (Kristeva 1988, cited in Akhtar 1999: 99)

In this chapter, we will be looking at the interconnected nature of language attitude, sense of self, and connection to the first language as exhibited by first-generation immigrants throughout the large body of accumulated literature in both socio- and psycholinguistics. Although the majority of studies do not explicitly state that the above phenomena are linked to the individual's emotions (indeed, our search using a key word "emotion" produced few results in this trend of research), we worked under the assumption that language attitude and sense of self are deeply rooted in human emotions. Thus, we attempted to re-conceptualize evidence reported in the reviewed studies in light of the emotions that become central to any immigration experience.

The chapter starts with introducing a concept of language attrition as it is viewed through at least one theory of forgetting in the field of psychology: language suppression. Afterwards, it continues with a broad overview of those studies on first language attrition which uncover factors that account for the immigrants' first language maintenance and attrition. From those factors, this chapter will focus mainly on language attitude, sense of self and the role of emotional connections with the native language and native land, as all three often are hard to tease apart. Finally, the chapter will look at parents' attitude towards L1 transmission to a younger generation. By keeping language attitude and identity in focus, we aim to explore the emotional component that accounts for the process of language attrition and language maintenance in first-generation immigrants.

2 Linguistic suppression

As with any knowledge stored in human long-term memory, knowledge of a language spoken by an individual prior to immigration is susceptible to change and to ultimate forgetting. This phenomenon is known as language loss, language attrition, language forgetting, or even language erosion (see the use of the latter in Giles and Johnson [1987]). In this

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overview, we will be using the term "language attrition", while being aware that it is interchangeable with all other equivalents widely used in the field.

Ecke (2004) presented an extensive review of studies on L1 forgetting that drew on theories of forgetting from the field of psychology (e.g., repression/suppression, distortion, interference, decay, retrieval failure, etc.). One of these theories – repression or suppression – particularly is relevant to the present chapter. Just like how individuals deliberately can suppress unpleasant or traumatic memories, various socio-psychological factors can lead speakers of a language to suppress the use of that language. Why do individuals suppress their language, if not due to strong emotional feelings towards that language, culture associated with that language, or memories encoded in that language? The accumulated literature on L1 attrition has shown evidence of how children refuse to speak their L1 upon arrival in their host country. The intentional suppression of language use can be found in studies on adoptees (e.g., Isurin 2000; Nicoladis and Grabois 2002) who tend to switch abruptly to their second language (L2). This may be due either to their desire to integrate into a new socio-cultural and linguistic environment or to a desire to forget about their traumatic experience of living in an orphanage. However, not only adoptees lose their L1: A similar trend has been observed among children who immigrated with their parents (Kaufman and Aronoff 1991; Marcos 1982; Wong Filmore 1996), suggesting that even the emotional connection to the L1 imparted to young children by their family can be overpowered by a general desire to fit into a new sociolinguistic context.

There has been a debate regarding whether the memory of a suppressed language in young children can be recovered later in life and whether such recovery is qualitatively and quantitatively sufficient for the individual to function in the recovered language. The studies on age-regression hypnosis (As 1962; Footnick 2007; Fromm 1970) revealed all participants could communicate in their respective childhood languages when under hypnosis. Yet in a normal, alert state, participants could understand little of that language, indicating that while these memory traces persist, they are non-functional under normal circumstances. Fromm (1970) provided some insight as to why this might happen. When mentally regressed to age three, an age at which he had lived in a Japanese internment camp, the participant in her study spoke his L1 Japanese freely. However, when regressed to seven years old, after he had left the camp, he had no ability to speak the language. Supposedly, the memory traces of the childhood language were present in the participant's mind at both times. The difference in language ability came from the differing remembered selves. At age three, he was immersed in a Japanese language environment, while his seven-year-old self had lived in an English language environment. As Fromm hypothesized, his apparent loss of Japanese between those two ages came from suppressing the language – something perhaps that came from wanting to belong in the English-speaking American context and to distance himself from traumatic memories of living in a Japanese internment camp. This experience of a child secluded in the camp and isolated from his society hardly can be considered an emotion-free event, and so the consequent desire to suppress memories associated with that period in his life stem from traumatic memories. Psychological trauma, by definition, "is the unique individual experience of an event or enduring conditions, in which the individual's ability to integrate his/her *emotional* experience is overwhelmed" (Giller 1999, emphasis added).

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Another trend of research that has gained power in the last two decades deals with searching for memory traces of a forgotten childhood language in adult adoptees or adults who had spoken an additional language in their childhood (Au et al. 2002; Au et al. 2008; Bowers, Mattys, and Cage 2009; Hyltenstam et al. 2009; Isurin and Seidel 2015; Montrul 2011; Pallier et al. 2003; Park 2015; Ventureyra, Pallier, and Yoo 2004). Although the majority of these studies primarily focused on the impact of re-exposure to the forgotten language on relearning that language, Isurin and Seidel's (2015) study indicated that the recovery of the childhood language, as in the case of their participant, indeed can be associated with a strong emotional connection with the forgotten native language.

Adult immigrants likewise can go through the process of language suppression, as some memoir literature by bilingual immigrant writers has shown (Hoffman 1989; Lvovich 2007). Although Pavlenko and Lantolf's (2000) publication primarily deals with the analysis of autobiographical narratives and "life stories", as they are reported by immigrant writers, they devote some discussion to the emotional effect of language loss and separation from native culture. The phenomenon of language suppression also was reported by Schmid (2002), who studied 54 German Jewish immigrants to English-speaking countries. The author suggested that the rate of language attrition is determined by the degree of persecution and attitudes towards the native language community, as well as by the period of exposure to traumatic experiences. In other words, the highly traumatic – or emotionally negative – experiences from the past can lead to the individual's suppression of the language associated with that past. As we can see, one theory of forgetting, suppression/repression, can directly be linked to emotions especially in cases of psychological trauma: In these instances, forgetting is associated either with the individual's desire to suppress the native language associated with traumatic life experiences that defined the pre-immigration life or with the desire to integrate faster into a new host country.

As fascinating as such studies on language suppression are, the infrequent occurrence of such reports leaves us with a much bigger body of research on L1 attrition where the attitude towards L1 maintenance and the sense of self take center stage.

3 Language attitude, emotional connection to L1, and language attrition

Yet determining what "attitude" is, let alone quantifying it, is not a simple task. Language attrition in immigrants has been studied both by socio-linguists (who look at language maintenance in immigrant communities) and psycho-linguists (who look at language maintenance in individual speakers). The methodologies of these two groups differ greatly, but they generally concur on the majority of factors that account for language attrition; there is also a consensus that the line separating sociolinguistic factors from psycholinguistic ones is rather fuzzy. Moreover, while standard sociolinguistic variables, such as age, gender, and educational level, are easy to quantify, more subjective factors, such as attitude and motivation, which we believe are deeply rooted in emotions, are more elusive for a rigorous statistical analysis (see Ben-Rafael and Schmid [2007] for a more detailed discus-

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sion of theories related to language attitude). Operationalizing these factors – *emotion, attitude, sense of connection* – is a problem for any studies that attempt to investigate the role of emotion in language maintenance. Thus, in the studies reviewed in this section, we re-conceptualize motivation as a strong drive or impulse, partly rooted in emotions, to achieve a certain level of fluency in L2.

Compounding this difficulty is the issue of how small the body of research on language attrition is. However, a more substantial body of literature has contributed some insights about the language attrition process: L2 acquisition. Language acquisition and forgetting often have been conceptualized as being part and parcel of the same process, and so theories of language acquisition sometimes have been transferred to and transformed into theories of forgetting. To illustrate, the issue of language attitude and motivation to learn a new language is evident in studies on L2 acquisition (Gardner et al. 1987; Masgoret and Gardner 2003). A widely used Attitude/Motivation Test Battery which allows quantifying the role of attitude in language acquisition was proposed by Gardner (1985). Subsequently, Gardner et al. (1987) attempted to build a model of language attrition based largely on these same attitude factors. Their investigation of L2 retention in students over the course of summer showed that attitudes and motivation were implicated in L2 acquisition and retention. Later Masgoret and Gardner (2003) performed a large-scale meta-analysis of numerous studies conducted by the second author and his associates. In total, they examined 75 independent samples involving 10,489 L2 learners. The results of the analysis clearly demonstrated a correlation between achievement in L2 learning and motivation; moreover, the effect was higher than the correlation between achievement and integrativeness.

What these and other works on motivation and emotion in language learning tell us is that the motivation to learn a new language features into the level of retention of that language. If we transplant this idea into the field of L1 attrition, we may expect a similar positive correlation to take place. The more motivated the immigrants are to preserve their native language, the better the retention of that language will be. The motivation to maintain the native language may also translate into the high emotional value that immigrants ascribe to their L1, which often is linked to their self-identity. Not surprisingly, the attitude towards L1 becomes one of the main factors in studies on language attrition in first-generation immigrants. Attitude also is one of the major variables in studies on identity negotiation in immigrants. Both phenomena, attitude towards the maintenance of L1 and self-identity, undeniably are highly emotional concepts in immigrants' lives, even if this connection rarely is made explicit in the large body of research on immigration and identity or immigration and language maintenance. Thus, we proceed with the following review based on our re-conceptualized treatment of these concepts.

Attitude towards L1 also has been examined by comparing the relative strengths of an immigrant's emotional ties. The standard inventories used in socio- and psycholinguistic studies on language attrition often have conceptualized the attitude towards L1 maintenance as the emotional affiliation of an individual with one language (L1) over another (L2), drawing on theories grounded in social psychology (Giles and Johnson 1987) or cross-cultural psychology (Isurin 2011). In one of the earlier publications on language maintenance in minority groups, Giles and Johnson (1987) formulated the ethnolinguistic identity theory, which, in turn, heavily drew on social identity theory as postulated by Tajfel (1974,

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1981). According to the ethnolinguistic identity theory, language becomes one of the social dimensions of comparison with outgroups, whereby intergroup members ascribe high value to their ethnic language and switch to it as a sign of belonging to their ethnic group. Giles and Johnson (1987) tested the theory on Welsh-English bilinguals by using a set of questionnaires tapping into different aspects of linguistic and social communication of Welsh speakers with ingroup and outgroup members. The theory was further tested in a study of 40 Turkish immigrants in Australia (Yagmur, de Bot, and Korzilius 1999). The results of the study showed a consistent picture of shift away from Turkish among Turkish speakers in Australia who perceived low Turkish vitality and high Anglo vitality. Having admitted that no direct cause-effect relationships between L1 attrition trends and the results of the survey instruments can be assumed, the authors concluded that "implicit negative attitudes towards L1 and instrumentally motivated valuation of L2 have some effects on the second generation's language attitudes and language shift to L2" (Yagmur et al. 1999: 65).

Based on data from a large-scale sociolinguistic study and operating on Giles' idea of ethnolinguistic vitality (in addition to the concept of "linguistic markets"), Jaspaert and Kroon (1991) looked into language choice and factors influencing that choice among Turkish and Italian immigrants in Dutch language areas (Flanders and the Netherlands). The primary conclusion of the study – not entirely unexpected – was the importance of ethnic community in each individual's choice of language. Another theoretical underpinning related to the role of attitude in language retention was proposed by Gonzo and Saltarelli (1983): Their "cascade" model of attrition suggests that the second generation of immigrants already receives a corrupted version of their parents' L1, which, in addition to other factors, may result in complete loss of an ethnic language within two or three generations.

While the above studies show early attempts at building a theoretical basis for the study of language maintenance and shift or testing the newly emerged theories, later scholars turned to in-depth study of data collected from particular groups of immigrants residing in the same host country (e.g., De Bot and Clyne 1989, 1994); immigrant groups of the same L1 background residing in different countries (e.g., Klatter-Folmer and Kroon 1997; Isurin 2011); different linguistic communities residing in the same host country (Ben-Rafael and Schmid 2007); or immigrant groups of the same linguistic but different ethno-cultural background in the same host country (e.g., Irwin 2017).

In *Dutch Overseas* (Klatter-Folmer and Kroon 1997), the contributing authors discussed both common and unique issues concerning a single immigrant language, Dutch, spoken in Australia, Brazil, Canada, France, Indonesia, Israel, New Zealand, South Africa, and the United States. The intriguing finding across most of the contributions in the volume concerned the rapid speed with which both Dutch communities and the motivation to speak Dutch among Dutch immigrants were dwindling. The second generation of Dutch speakers tended to abandon the native language almost altogether and switch to the language of the host country as the major means of communication.

Much inspired by the above body of works, Isurin's (2011) study looked into attitudes towards language maintenance in 104 Russian-speaking immigrants residing in the USA, Israel, and Germany. Among numerous factors involved in L1 attrition and maintenance, the study looked into the immigrants' level of comfort in speaking the L1 and their attitude

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towards a heavy Russian accent that they might hear when other Russian speakers communicate in the respective L2 (i.e., English, German, or Hebrew). While the majority of the participants admitted that they were comfortable speaking Russian in public, when broken down along ethnic lines (i.e., ethnic Russians vs. Jewish Russians), more ethnic Russians showed strong links with their native language than their Jewish counterparts did in all three groups. The same trend was evident in the analysis of attitudes towards language maintenance. Here it is interesting to note that the Russian immigrants to Israel most strongly favored maintaining Russian for themselves and had the same attitudes as the US group towards language maintenance for children, although the Israeli group more strongly adhered to its Jewish identity than the other two groups did. The author suggested that the desire to maintain the native language may result from the immigrants' perception of the host country – and by extension the host country's language – as inferior to the immigrants' native culture. In other words, the attachment – and we can safely specify that this is an emotional attachment – to the native language may not reflect the immigrant's self-identification (note that pure count revealed that the word "emotion" and its derivatives were used 26 times by participants in this study). In contrast, it may show the immigrants' increased pride in their native cultural background once they are confronted by a host culture that is perceived as inferior. It is also worth mentioning that only a group of German-based immigrants showed strongly negative attitudes towards the Russian accent heard in other Russian immigrants' speech. A closer look into the issue of identity suggested that the less tolerant attitude towards the Russian accent among Russian immigrants in Germany stemmed from the immigrants' belief that one should be born in Germany in order to become German. Thus, accent became a social marker of non-belonging, and the connection with the native language was overtaken by the desire to integrate into the host society.

A longitudinal study on language attrition by an immigrant community – albeit one not started with a longitudinal design in mind – was conducted by Kees de Bot and Michael Clyne over the course of a few decades. In 1971, Clyne collected the data from 200 postwar (WWII) Dutch-English immigrants in Australia. In 1987, 40 of the participants from the original pool were retested, using the same tests and procedures. In addition, there was a small group of participants who were less fluent in Dutch during the testing of 1971; five of these participants were retested in 1991/92. Also, a number of elderly Dutch immigrants in a Dutch-speaking retirement village in Melbourne were interviewed. The results of the study were reported by the authors in two separate publications (De Bot and Clyne 1989, 1994). The major findings were that there was little attrition of Dutch in those immigrants and that there was a greater need for a switch to Dutch almost exclusively in elderly participants, due to the comfort of living in the "native" enclaves such as the Dutch-language retirement facilities in Australia. There was a third round of tests in 2005, which probably would make this study the lengthiest longitudinal study ever conducted in language attrition research – 34 years from start to finish. As the data from the 2005 retesting have not been published, the following quote (2017) comes from personal correspondence between Kees de Bot and the first author of this chapter.

> In 2005 some 15 of the participants of the study have been tested again with the same procedures. The picture is now radically different. Since most of the participants moved to retirement villages where

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> Dutch is the dominant language, combined with extensive access to Dutch spoken media, the input they got is massive and their scores on the tests show an improvement rather than decline. In addition, there may be self-selection, with those still proficient being more willing to be tested than those that feel their proficiency has deteriorated. (Kees de Bot, personal communication, 2017)

As the study tested language attrition over an extensive period of time in the same group of immigrants, language attitude or identity issues were not the focus of investigation. However, we may assume that the need in elderly Dutch immigrants to move to Dutch-language retirement homes stems from their strong affiliation with their native country, which, in turn, may explain the remarkably good retention – and even improvement – of their L1 skills.

The correlation between connection with the native language (which we believe is deeply rooted in emotions), individuals' attitude to the preservation of that language, and language attrition has been found in a series of other studies. Ben-Rafael and Schmid (2007) present an interesting data set gathered from two groups of immigrants in Israel: French-speaking immigrants who settled in a kibbutz in the late 1950s to early 1960s and whose immigration was triggered by strong ideological convictions, and Russian-speaking immigrants whose influx into Israel in the early 1990s reached over a million. The latter had come to Israel for pragmatic reasons and due to the lack of better alternatives at the time (see Isurin 2011; Remennick 2007), and they settled mostly in urban areas of Israel. The results reveal clear distinctions in language attitudes between the two groups. For the Francophones, the motivation to acquire Hebrew was strongly integrative, whereas Russian immigrants acquired it for purely instrumental reasons. As for L1 maintenance, the Francophones did not put high value on the preservation of French or on passing it onto their children, whereas Russian immigrants showed strong motivation to retain Russian both for themselves and for their children. The linguistic analysis of speech samples revealed that the Francophone participants showed more signs of attrition than the Russian ones. The authors concluded that there is an inherent connection between language attitudes and language attrition but called for further investigation of this phenomenon. We may add that the Francophone participants in their study had been staying in the host country for 40 years longer than their Russian-speaking counterparts by the time the authors tested their L1 performance and were much older at the time of the study (cf. mean age of the Francophones = 67; Russians = 46), which, by itself, might have contributed to more L1 attrition in the French sample.

Bylund and Ramirez-Galan (2016) collected their data on language aptitude and language attrition using a linguistic background questionnaire in which two main variables were used: linguistic contact and linguistic identification. The latter was defined as "the importance that the participant attaches to Spanish in terms of *emotional* bonds and function" (Bylund and Ramirez-Galan 2016: 630, emphasis ours). An emotional attachment to the native language showed significant effect for rate of L1 attrition. They tested 40 L1 Spanish–L2 Swedish bilinguals living in Sweden on a Grammaticality Judgment Test. The main independent variable was language aptitude. While the study showed no effect for that particular variable, linguistic identification (i.e., the importance that the participant attaches to Spanish in terms of emotional bonds and function) correlated with language attrition: Those participants with strong L1 identification were more accurate in judging L1

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grammaticality. Previously, the first author of that study also argued that the sociopsychological factors that influence language attrition are also maturationally constrained (Bylund 2009). This further supports the existent consensus in the field of L1 attrition that language attrition primarily should be studied on those bilinguals who leave their native country after their L1 has fully developed.

Perceived language dominance and language preference and their correlation with perceived language attrition was the theme of Dewaele's (2004) study. Web data gathered from 1,039 multilinguals showed that "[p]erceived L1 attrition has a strong effect on perceived usefulness, less on perceived colorfulness, perceived richness, perception of the emotional force of swearwords and no effect on poetic and emotional properties of the L1. This is interesting because it suggests that the emotional resonance of the L1 remains largely unaffected by perceived L1 attrition" (Dewaele 2004: 99).

The role of emotions in L1 attrition is evident not only in the degree of the individuals' affiliation with their L1 but also in the speaker's preference for expressing emotions in one language versus another. In a quantitative empirical study of 30 Korean-English L1 dominant late bilinguals in New Zealand, Kim and Starks (2008) looked into emotion-related language choice (ERLC) in bilinguals; in other words, they measured bilinguals' self-reported preference for use of one language versus another in situations involving different emotional states, such as being angry/swearing, being stressed, tired, confused, shocked, etcetera. Later they corroborated the results of the questionnaires with data from follow-up interviews. The authors reported a shift to L2 as the medium of emotional expression, which was correlated with the loss of accuracy in L1.

Monika Schmid, a leading scholar in L1 attrition research, has developed a sociolinguistic questionnaire for measuring an individual's affiliation with or attachment to both the L1 and L2 (https://languageattrition.org/). Using a variety of questions, including those that specifically look into the sense of comfort/feeling at home and the emotional connection with the language, the questionnaire provides a tool to measure what is referred to as bilinguals' attitude towards the languages they speak. The questionnaire has been widely used in numerous studies on L1 attrition. In these studies, the attitude towards the L1 often is calculated based on numerous components, including the emotional attachment to the L1; however, rarely is it articulated as "emotion" in published reports. This supports our earlier argument that we can treat and re-conceptualize the abstract concept "attitude" as an emotional relationship that individuals have with their language.

In a number of studies by Monica Schmid and her associates, the link between language affiliation and L1 attrition was either not found (Hopp and Schmid 2013) or the effect was rather weak (Schmid and Dusseldorp 2010). When 40 late L1 attriters of German in Canada and the Netherlands were investigated in terms of foreign accent perception in their L1, language affiliation did not show any significant effect, although the German group in the Netherlands showed a stronger bond with the German language and culture (Hopp and Schmid 2013). In another study on German immigrants in Canada (n = 53) and in the Netherlands (n = 53), the predictive power of identification and affiliation with L1, exposure to German, and attitude towards the L1 in L1 attrition were shown to be relatively weak (Schmid and Dusseldorp 2010). Moreover, a puzzling finding – that a more positive attitude towards the L1 led to more L1 attrition – ran opposite to predictions and left the authors at a loss to explain.

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As we can see from the above overview of attitude towards the L1 – or, arguably, the individual's emotional attachment to the language – and its effect on L1 maintenance/attrition, the majority of studies do show that positive attitude to the native language and culture lead to the desire to preserve that language among first-generation immigrants. The attrition data, however, present a conflicting picture, showing that the desire to preserve the L1 does not necessarily translate into the preservation of a "perfect" L1. We also can see that psychological factors, such as emotional affiliation with the language and attitude towards the native language, are not easy to quantify. Thus, the most compelling evidence still may come from immigrants' personal narratives, where in a very passionate way they talk about their relationship with their native language and native culture.

4 Identity, sense of belonging, and language attitude

An attachment to the native language is linked inherently to the immigrant's sense of self. As a Russian immigrant in the USA poignantly noted,

> [f]or the last decade, English has become my main language and the one I articulate complex ideas in. I feel disconnected from Russian language (although I read and communicate in it) because of what it represents on the emotional level: many losses and mistakes from the past made due to the tragedy of Soviet life, its history and its barbaric culture. I am absolutely not proud of Russian present as a country either. English represents a person I am today and it validates me every day of my life. English is the language I write in and represent the reality, including the past. English is the main language of my children. (Isurin 2017a: 93)

Studies on identities in immigrants often rely on social identity theory (Tejfel 1974, 1981), which maintains that individual behavior reflects an individual's larger societal units and that people think, feel, and act as members of collective groups, institutions, and cultures. People build their favorable social identity by comparing their group in a positive way against an outgroup. The process of social identity therefore allows for group members to construct their identity in a way that feels right, while alienating those from outside groups. According to Padilla and Perez (2003),

> [w]ithin their new social context, newcomers form perceptions regarding expectations that members of the dominant group have of them. Perceptions are likely to affect the process of redefining their identity and whether and to what extent they choose acculturation and membership in the host culture [...]. The social identities that they bring with them and the identities they develop in the new environment influence social cognitions that in turn guide their behavior. (Padilla and Perez 2003 50)

Often it is hard to disentangle these two variables, language attitude and identity, since language becomes one of the defining markers of the immigrant's identity. Thus, to minimize repetition, if not entirely to avoid it, in this section we will look at those studies on L1 maintenance where identity was the focus of investigation. The literature summarized in the previous section, however, references identity on more than one occasion; identity is woven into these accounts.

Identity negotiation and language attitudes in the immigration context often represent a complex picture, in which individuals redefine their self and their attitude to language

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not just against the backdrop of the host culture and language but also against another immigrant group in the same immigrant space. An interesting case of Russian-speaking immigrants in Germany is presented in Irwin's (2017) study. Two groups of participants, Russian Jews and ethnic Germans from Russia, showed drastically different attitudes towards language mixing, both in the first and in the second generation of immigrants. While Russian-German code-mixing is a well-accepted practice among Russian Germans, Russian-Jewish immigrants show a strong negative attitude towards this linguistic practice. This attitude is triggered by their desire to distance themselves linguistically from another Russian-speaking group in Germany, ethnic Germans from Russia, who are perceived as intellectually and socially inferior by this group of Russian-Jewish immigrants. Accordingly, the avoidance of language mixing among immigrants may lead to a better preservation of the native language, yet the motivation to do so is based on an emotional reaction against "the other" rather than an emotional attachment to the native language per se.

Based on the reframing of the data from her two major studies (Schmid 2002, 2007), Schmid (2011) suggests that language attitude and identity are a better predictor for language attrition than frequency of language use. As we discussed earlier, her German Jewish participants (Schmid 2002) showed different rates of L1 attrition depending on the duration of their persecution in Nazi Germany. The author concludes that "[t]he reasons for this pattern of L1 attrition probably lie in a situation where the persecuted minority had the same L1 as the dominant majority, and the L1 thus became associated with elements of identity of that dominant group. In such situations, a symbolic link between the language and the persecuting regime can lead to a rejection of that language" (Schmid 2002: 196).

We may extend this explanation to the findings in Isurin's (2011) study, whose Russian Jewish participants – persecuted also, by the Soviet regime – showed a weaker link with their L1 than their ethnic Russian counterparts. On the other hand, Russian-Jewish immigrants in the USA and Germany (but not in Israel) showed a tendency to self-identify as Russian depending on whether they had experienced prior discrimination and anti-Semitism in the former USSR (i.e., those who experienced discrimination were more likely to present themselves as simply Russian). The question related to self-identification was formulated as self-identification presented to people in the host country. Since the identity marker, known as "nationality", was imposed on all citizens in the USSR and led to discriminations against Russian Jews – at both official and domestic levels – the author suggested that the shift in self-identification could result from the immigrants' desire to protect themselves from possible negative reactions in the new country. Thus, self-identification and emotional connection with the native language do not go hand in hand in that study. However, when data on a small pool of young Russian immigrants in Germany were drawn from the same set of data (Isurin 2017b), a different picture emerged. Young Russian Jewish participants tend to identify themselves as Russian and value the knowledge of the Russian language for themselves and their children higher than their ethnic Russian counterparts. The author suggested that the presence of a large Russian Jewish community in Germany necessitates a need for the preservation of the L1 among Russian Jewish participants. Most of them came to Germany as children and grew up in big extended families. Conversely, ethnic Russians immigrated for educational purposes and left their families behind. The small pool of participants in that study did not allow the author to make any far-reaching conclusions.

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In line with the longitudinal study on Dutch immigrants in Australia (De Bot and Clyne 1989, 1994), in which a shift towards L1 in elderly immigrants was reported, a small-scale qualitative study on 20 German immigrants in the Netherlands (Prescher 2007) presented an intriguing picture. A clear difference between the two groups of participants emerged: One group wanted to assimilate as quickly as possible, rejecting their linguistic and cultural origin; another tried to maintain their cultural identity while remaining open to the Dutch environment. Despite such drastically different attitudes to integration, with time both groups showed greater affiliation with their original language and identity and a more critical attitude towards their host country. Prescher (2007) concluded that

> [t]he longer the duration of immigration, the stronger the attempt to return to the original identity and language. Moreover, the more participants try to assimilate in Dutch society, the more problems they perceive concerning their identity: wanting to integrate completely, at the end of the day they have to accept they will remain different, resulting in disinclination to adapt any further. In the end, immigrants are used to being different; they accept their "nationlessness", their imperfect languages, they have created their "home" in their own transcultural selves. (Prescher 2007: 201)

The concept of home and sense of belonging is another issue closely linked to emotional attachment in immigrants and their sense of self:

> "Absence makes the heart grow fonder", and a migrant who initially wanted to shed her former identity and blend into the new society might, at a later stage (for example upon retirement) find herself thinking of her native country with nostalgia or even homesickness. The reverse, of course, may also be true – an initially reluctant migrant may come to accept and love her new surroundings, and the memories of "home" may become increasingly distant or meaningless. (Schmid 2011: 98)

Demuth (2000) introduces key factors that should be considered in any immigration study, the concept of home being among them. She differentiates between "home" as a technical term that may describe any place where the individual has lived a few years, and the more complex phenomenon, the *feeling* of "home". The author suggests a few factors that may contribute to the general sense of uprootedness in immigrants, such as age, the period of detachment from the homeland, and a very important factor of voluntary versus forced migration. In Isurin's (2011) study, an additional factor was introduced: a factor of citizenship as the main variable in the analysis of immigrants' sense of belonging. Since the majority of her participants immigrated during a time when they were forced to give up their Soviet citizenship, a clear trend was observed: 77 % of those who only had citizenship of the host country never went back to Russia. However, when broken along the ethnicity line, ethnic Russians still visited Russia more regularly than their Jewish counterparts. The latter suggests that the concept of identity is tightly connected with the emotional attachment that immigrants feel towards their native country: Immigrants coming from the same L1 environment but having a different status prior to immigration – majority versus minority groups – forever may define their attitude to the former homeland based on the social status that they had in their native country. This was further evidenced in the above study: Russian Jews in all three host countries (i.e., the USA, Israel, and Germany) overwhelmingly affiliated with their host countries, which they consider their home. As was discussed earlier, those participants also showed a weaker emotional connection with the L1, which is associated with the land that is no longer perceived as home.

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5 Parents' attitude to L1 transition

The level of emotional connection with native language and country in immigrants often determines language transmission between generations. Although an overview of studies on heritage speakers is beyond the scope of the present chapter, in this section, we will discuss some findings on the parents' attitude towards the importance of L1 maintenance in their children. As mentioned earlier, the word "emotion" rarely is mentioned in such studies; however, we worked on the assumption that any strong feelings that parents might have about their children knowing or not knowing their native language (i.e., attitude to language maintenance) is grounded deeply in emotions.

It has been reported that children lose their L1 simply because their parents discouraged or prohibited their children from using the L1 at home in order to promote the children's success in school or to protect their children against discrimination, stigmatization, or racism (see Ecke [2004] for more details). However, the majority of studies on language attitude towards L1 maintenance and L1 transmission to the young generation present a less extreme and a more uplifting picture.

In her extensive discussion of the factors responsible for a successful transition of a heritage language between generations, Pearson (2007) provides an intriguing finding from her previous study on 25 Spanish-English bilingual children (Pearson et al. 1997, cited in Pearson 2007) and a much larger study of 18,000 Flemish families in Belgium (De Houwer 2003, cited in Pearson 2007). Both studies revealed that only 75 % of children in bilingual families become bilingual, whereas 25 % of children raised in the bilingual context do not become bilingual. The question of why those 25 % of children fail to maintain the language of their families becomes central to Pearson's (2007) quest. Among the main factors (e.g., the amount of input, language status, language medium, the presence of a sizable community, social and economic status of parents, etc.), the author discusses the importance of the family attitude towards language maintenance in the young generation.

As mentioned earlier in this chapter, Ben-Rafael and Schmid (2007) illustrated language attitudes in two groups of first-generation immigrants in Israel (i.e., French-speaking and Russian-speaking immigrants). Both showed drastic differences in the importance of L1 for the first generation and its maintenance for children. While the Francophone participants allowed code-switching with their children and, in general, did not place high value on French as a linguistic medium in their communication with children, Russian immigrants, on the contrary, were very persistent in emphasizing the importance of preserving the Russian language in their families. Such strong desire to maintain a native language for children may not necessarily come from the parents' initial emotional connection with the native language and culture, but perhaps from a strong opposition to the host culture which is perceived by Russian immigrants as inferior to the native one (see Isurin [2011] for more detail).

There is extensive debate as to which factors are more or less important for L1 maintenance in the second generation of immigrants, and support for the role of attitude versus input is not always as straightforward. In Oller and Eilers (2002, cited in Pearson 2007), children in Spanish-English bilingual families tested differently in English and Spanish, depending on the professional status of their parents. In English, children of professionals

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outperformed children from working class families, whereas in Spanish, children from working class families did slightly better than children of professionals, even in those cases where professionals had made a commitment to speak only the heritage language to their children. Moreover, in the second generation, attitude towards language maintenance for the third generation does not necessarily reflect a realistic picture of language choice in the second generation. As Pearson notes, to the question "'Do you plan to teach your child Spanish [or another minority language?'], almost everyone said 'yes', but then in other parts of the same questionnaire they gave evidence against the possibility [...]. *The very students who wanted their children to speak Spanish did not recognize how little they chose it for themselves*" (Pearson 2007: 408, emphasis original). The latter suggests that the emotional attitude towards language maintenance for future generations does not necessarily translate into immigrants' efforts to promote the use of the heritage language and, vice versa, that strong intention of keeping the heritage language in the family does not often come from the immigrants' emotional affiliation with the native language. To illustrate, in Isurin's (2011) study on Russian immigrants in the USA, Israel, and Germany, only a few German-based parents (17 %) admitted that it is important for them to maintain Russian for their children (cf. 57 % both in the USA and in Israel), but when asked if they would regret the loss of Russian in their children, it was the German group that overwhelmingly said "yes" (67 % vs. 31 % in the USA and 54 % in Israel). Regardless of their attitude towards the maintenance of the Russian language, Russian parents in Germany seem to put more effort into maintaining the language in their children by sending them to Russian language classes and by correcting their Russian more often than those in the other two groups. The dichotomy between the German immigrants' attempt to retain Russian in their communication with children and their obvious acceptance of its devaluation for the second generation is explained through the prism of other findings in the study: "[T]he attitude towards accent-free German as a promise of being accepted by the society at large as well as the general belief that no immigrant fully can fit into German society may contribute to the parents' conviction that the eventual acculturation of their children in Germany should come at the price of rejecting the need for the Russian language" (Isurin 2011: 221–222), no matter how emotionally unsettling it is for parents.

Similar discrepancies between parental linguistic attitudes and patterns of use were found in a case study on a contact situation involving a young child in Italy: Although the parents expressed support for a local dialect, in practice they corrected its use. Dialect, instead, is seen to be allowed only in certain pragmatic contexts, such as for expressive purposes (Ghimenton 2015). The author argues that parental attitudes do not necessarily predict language choices and that the relationship between the two is not one of causation.

The debate regarding the role of parental attitude towards children's ultimate attainment in their heritage language has continued across a few other studies. These studies have overwhelmingly found that when parents have unambiguously positive attitudes towards the L1, their children have higher attainment in their heritage language. This has been found across a variety of linguistic and cultural settings. Gharibi and Boers (2017) looked at vocabulary acquisition in 30 Persian-English simultaneous and sequential bilinguals (aged 6–18) in New Zealand. Linguistic performance was analyzed against several sociolinguistic and extralinguistic factors, with parents' attitude taking the central role.

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Parents' attitude was found to be the strongest predictor of the simultaneous bilinguals' vocabulary knowledge, with frequency of use taking second place, whereas the sequential bilinguals' vocabulary knowledge primarily was associated with age of arrival. The findings highlight the role parents can play in the heritage language development of their children if children are exposed to a majority language early on in life. Highly positive attitude towards language maintenance in children was reported in a study on nine Korean immigrant parents in Montreal (Park and Sarkar 2007). For these immigrants, the importance of keeping up their native language in their children was associated with maintaining Korean identity in their children. This further illustrates how closely language and identity are interconnected in the immigration context. According to Li (1999), parents' positive attitude towards passing the native language to children contributed to the maintenance of the children's heritage identity and language. In her study, the author describes her own experiences raising her daughter in a new culture and how her own attitudes may have affected her daughter's language learning. Even in young children, such as bilingual Turkish-Dutch toddlers, the mothers' attitude towards the use of the heritage language was shown to have an impact on the child's language development (Prevoo et al. 2011). Based on questionnaire data (87 mothers) and observational data gathered in a short-term longitudinal study, evidence was found that mothers who felt more strongly connected to the Turkish culture spoke more Turkish and less Dutch with their toddlers. This provides further support for the close link between the parents' emotional connection to their native language and culture and parents' motivation to maintain the native language for their children. Moreover, the language use of second-generation Turkish immigrant mothers differed significantly from mothers' language use with their own siblings: They spoke more Dutch with their siblings and more Turkish with their children, which suggests that even in the second generation of Turkish immigrants in the Netherlands the emotional connection to the Turkish identity and culture perseveres. According to Hakuta and D'Andrea (1992), third-generation immigrants are likely to switch fully to the host language; thus, Turkish-Dutch toddlers from Prevoo et al.'s (2011) study may become more dominant in Dutch than their second-generation mothers. Meanwhile, Kondo's (1997) case studies based on interviews with 20 second-generation Japanese speakers in Hawaii also provides evidence for the crucial role Japanese mothers play in Japanese language maintenance, although the language behavior of those speakers was found to interact with social identity, which is dynamic and changes over time. Although Anstatt's (2017) study on 44 adolescent Russian-speaking immigrants in Germany did not deal with parental attitude towards language maintenance, it is worth mentioning that the study found evidence that second-generation immigrants maintained a loyal and emotional attitude towards the Russian language and proud feelings towards Russia. We may assume that without a strong family support and exposure to positive aspects of the native culture, such attitudes would not persevere in the second generation.

6 Conclusion

In this chapter, we presented an overview of studies on language maintenance and attrition in the immigration context and showed the role that emotional attachment to the native

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language and native country plays in those two processes. Apart from a few reports on extreme cases of language suppression, the majority of studies discussed here avoid the direct use of the word "emotion" while analyzing extralinguistic psychological factors, such as attitude towards language or identity. Scholars might be cautious to introduce a less technical, albeit more universally human, term. However, what is "an attitude to language/country" or what is "a linguistic affiliation"? We argue that these phenomena are deeply rooted in the emotional feelings that guide an individual's behavior in a new sociocultural environment. The role of those feelings is undeniable, yet their outcomes are not always straightforward. While most studies show a link between attitudes towards a native language and attrition of that language, this is not always the case. Sometimes immigrants can feel a strong connection with the L1 and the country left behind, yet their L1 will show signs of attrition nevertheless. The same applies to the individual's sense of self and its role in the maintenance of the L1. Feeling "at home" in the host country may predict a weak affiliation with everything "native". However, even this logical expectation does not survive a test of time, as we could see from a longitudinal study of Dutch immigrants in Australia (De Bot and Clyne 1989, 1994) or German immigrants in the Netherlands (Prescher 2007). Parents' desire to keep the native language for the younger generation seems to reinforce language maintenance in immigrant families, as many studies suggest. However, once again, there are findings contradicting this general rule of thumb. To make the picture even more complex, we argue that the emotional affiliation with the native language does not necessarily stem from the immigrant's nostalgic feelings about the "home" left behind. The strong rejection of the host culture (e.g., Russian immigrants in Israel; Isurin 2011) or the attempt to distance oneself from another immigrant group of the same linguistic background in the same migrant space (e.g., Russian-Jewish vs. Russian-German immigrants in Germany; Irwin 2017) may lead to a better L1 maintenance. By the same token, a strong effort to maintain the L1 in children is not always supported by the immigrants' genuine belief that their children truly need that language (e.g., Russian immigrants in Germany; Isurin 2011). Emotional involvement in such decisions is indisputable, but it is not necessarily grounded in positive feelings about the native land and the native language.

The role of emotions in the immigrants' attitude towards language maintenance and the subsequent role of the attitude to the L1 in the process of L1 attrition continue to present a challenge for scholars studying these phenomena. An attempt to quantify something as fundamentally "unquantifiable" as the immigrants' attachment to their native language and native homeland often leads to data that are messy or ambiguous. Schmid and Dusseldorp (2010: 51), in their purely quantitative study of factors influencing language attrition, were left "at a loss to explain" the data that contradicted prior research on the role of attitude in language maintenance. Yet it is no surprise that they were left without any explanation when attempting to analyze their results. After all, how can emotions and attitudes be quantified? And when they are reduced to numbers on a Likert scale, what explanatory power remains? Emotions and attitudes are rooted deeply in the complex details of a person's whole life. Abstracting quantitative factors out of the complexity of human experiences means losing the details of those lives. This is particularly troublesome when those lives are the lives of immigrants, whose experiences are multifaceted, contradictory, heterogeneous, and emotionally complex.

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Studying the role of emotion in language attrition, therefore, is not something best done using quantitative methods. However, abandoning such complex issues may be even more detrimental for the field of first language attrition: The foregoing studies have consistently shown that cultural and language affiliation is crucial to understanding why languages are maintained and why languages are lost. Recently, there have been calls to research "whole people and whole lives" in language acquisition, using qualitative methods to examine language learners as complex people with complex backgrounds and identities instead of a bundle of sociolinguistic variables (Coleman 2013). Maybe it is time for us to acknowledge the fact that emotional feelings associated with the former "home" and the current "self" can better be studied qualitatively by allowing immigrants to share their individual stories about why they feel the way they do about themselves and their native language. It is through these narratives, filled with real human emotions, that we may get a better glimpse into the complex issues of language attitude, identity, and sense of belonging.

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Yeşim Sevinç

64 Emotion in migration and in language contact settings

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Abstract: The central role of positive and negative emotions in language contact settings has been underestimated both by sociolinguists and by social psychologists. Traditionally, in an effort to understand the factors that contribute to language maintenance and language shift, scholars have placed a considerable emphasis on individual and/or community attitudes and normative standards. "Emotion" has often and mistakenly been subsumed under "attitude". This chapter argues that a better understanding of the concept of "emotion" and its role in immigrant contexts can be the key to unravelling the connection between intercultural communication and outcomes of language contact settings (i.e. language maintenance and shift). It first outlines the main approaches to the study of language maintenance and shift in immigrant contexts. Subsequently, it critically surveys existing proposals on the factors that influence the processes of language maintenance and shift, paying particular attention to the absence of studies on the role of emotion in these processes. Through a unifying and interdisciplinary perspective, the chapter creates a framework for acknowledging differences and relationships between the principal factors (e.g. attitude, motivation, and norms) and emotion. Finally, it concludes with a discussion of ways in which research on emotion and emotional reactions in immigrant contexts can offer unique contributions to the study of language contact situations.

Keywords: emotion, language contact, language shift, norms, attitudes, motivation, anxiety, immigrant contexts, sociolinguistics, social psychology

1 Introduction

Language, emotion and culture permeate all domains of human life, and they are often at the crossroads of social and psychological interventions. Their complex and dynamic interplay can provide useful insights into the implications and the effects of intercultural communication on quality of life and well-being of both individuals and society. The study of intercultural communication is heavily intertwined with that of related phenomena such

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as multilingualism, language maintenance and language shift, as well as the attrition, loss, death, endangerment, revival and revitalization of language, all of which "are, in one way or another, the outcome or the consequences of a plethora of language contact" (Pauwels 2016: 17) and/or "language conflict" situations, as Pütz (1994) puts it. In various language contact situations, complex emotions (e.g. shame, guilt, disappointment, frustration and anxiety) often prevail as a result of social influence, such as pressure on normative standards, and this is particularly evident in an immigrant or minority context (Sevinç 2016). Written with the aim of examining the role of emotions, both positive and negative, in language contact settings, the current chapter addresses the phenomena of language maintenance and shift with a central focus on migration, the site of most language contact. Note that this chapter does not discuss the ways in which multilinguals process and interact with emotional stimuli in different cultural and linguistic environments (see Kim and Starks 2008; Altarriba 2013), but rather the role of emotions in an immigrant and language contact situation.

Migration is an emotional journey, and along the way, individuals and communities accumulate heavy linguistic, social, cultural and psychological baggage. Without a doubt, sociolinguistic and emotional pressure exists in immigrants' daily lives to make one of their languages more dominant than the other(s) (cf. Grosjean 2008; Montrul 2013). Traditionally, in an effort to understand the factors that contribute to language maintenance and language shift in immigrant contexts, scholars have placed considerable emphasis on individual and/or community attitudes and normative standards. In this process, "emotion" has often mistakenly been subsumed under "attitude". In line with my aim to provide comprehensive insight into the study of language maintenance and shift, in this chapter I argue that a better understanding of the concept of emotion and its role in immigrant contexts is the key to unravelling the connection between intercultural communication and outcomes of language contact settings (i.e. language maintenance and language shift as discussed in this volume).

The chapter begins with definitions of key concepts, such as emotion, norms, attitude and motivation, followed by a brief review of research on positive and negative emotions which has so far been carried out in second language acquisition (SLA) and in positive psychology. I then discuss the main approaches to the study of language maintenance and language shift in immigrant contexts both in sociolinguistics and in social psychology, but argue that an interdisciplinary approach is necessary. With this in mind, I critically survey existing scholarship on the factors that influence language maintenance and language shift, paying particular attention to the absence of studies on the role of emotion in these processes. The chapter creates a framework for acknowledging differences and relationships between the principal factors commonly investigated in language contact research (e.g. norm, attitude and motivation) and emotion. Finally, the chapter concludes with a discussion of ways in which research on emotion and emotional reactions in immigrant contexts can offer unique contributions to the study of language contact situations.

1.1 Key concepts: attitudes, motivation, norms and emotion

The complexity of emotion as a concept has been emphasized by scholars from different disciplines in the humanities and in social and behavioral sciences. Emotion has proven

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remarkably difficult to define within a single discipline (see Izard 2010) and it has often been associated with a range of psychological phenomena, including temperament, personality, attitude, mood and motivation (e.g. Arnold 1960; Lucas and Diener 2008). Relevant to the purpose of the current chapter, it is necessary to define the concept of emotion from an interdisciplinary perspective and in relation to the following three phenomena that have so far attracted the most attention in the literature on multilingualism, immigration and language contact situations and that concern both psychological and sociocultural paradigms: attitudes, motivation and norms.

Attitudes are commonly understood as psychological tendencies that are expressed by evaluating a particular entity with some degree of favor or disfavor (Eagly and Chaiken 1993), and motivation as the reason for behavior, that which causes a person to want to repeat a certain behavior (Gardner 1985). Attitudes pertain to enduring beliefs about and predispositions toward specific objects or persons (Scherer 2005), while motivation is the combination of desire and effort in order to achieve a particular goal (Gardner 1985). Breckler (1984) has identified three components of attitudes that are highly interrelated: "A cognitive component (beliefs about the attitude object), an affective component (consisting mostly of differential valence), and a motivational or behavioral component (a stable action tendency with respect to the object, e.g. approach or avoidance)" (Breckler 1984, cited in Scherer 2005: 703).

Although motivation is shown to be one of the components of attitude, the interplay between motivation and attitude is a complex one (cf. Ellis 1994; Larsen-Freeman and Cameron 2008). Language learners' attitudes toward a language (including its status and prestige) and/or its speakers and their motivation for learning the language can concurrently affect language learning (Carroll 1962; Dörnyei 2009). Attitudes and motivation are often intertwined since they influence each other as well as the learning outcomes. Positive attitudes toward a language and its speakers can lead to increased motivation, which then results in better learning achievement and a positive attitude toward learning the language (see MacIntyre, MacKinnon, and Clément 2009, 2016). Furthermore, attitudes and motivation often intersect with other individual learner variables, such as language aptitude, language anxiety, language learning styles and strategies, and so forth. With their multifaceted construction and dynamic features (Dörnyei and Ushioda 2011), they are also constantly undergoing change and reassessment related to the actual social, political, and sociohistorical context and power relationships within those contexts (Pavlenko 2005), which takes us to the sociocultural aspect of this interplay, norms.

As Bourdieu asserts about norms, "no one can completely ignore the linguistic or cultural law" (Bourdieu 1983: 97). Norms can be viewed as cultural products (including values, customs, and traditions) that represent an individual's basic knowledge of what others do and think that they should do (Cialdini 2003). In the field of social psychology, norms are not behavior per se but rather mental representations of appropriate behavior, which can guide behavior in a certain situation or environment (Aarts and Dijkstherhuis 2003), like motivation and attitude. In linguistics, norms are often related to a standard language, a level to be complied with or reached (see Giles and Powesland 1975). Most languages have numerous individual, regional and social varieties, and the normative variant "generally becomes attached to the general set of prevailing linguistic norms associated with an influ-

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ential or high-status group" (Bowerman 2006: 702). Thus, the deviation from a norm implies an incorrect use of the language and raises the question of the appropriateness or inappropriateness of a certain linguistic form in a speech community (cf. Haugen 1966; Milroy and Milroy 1999).

Such deviations, in many cultures, carry a subjective norm with them, which is the perceived social pressure to perform or not to perform the behavior in question (Ajzen 1991). Closely linked to social roles, identities and cultural values, perceived or subjective norms and social pressure often incorporate social meaning, and along with linguistic prestige, they can shape attitudes at both individual and community levels. Individual and collective evaluation of specific languages or their varieties (attitudes) however may also lead to entrenched perceptions and value judgments of languages or speakers (norms), which may then be imposed on the entire speech community. It is also necessary to consider that speakers or learners of a language may be motivated or demotivated by norms depending on the level or intensity of the perceived social pressure. The possible link between attitude, motivation and norms and emotion is further discussed in Sections 1.2 and 1.3, which focus on language maintenance and language shift. But first I will discuss what constitutes emotion itself.

Scherer (2005: 498), in his influential theory of emotions, the Component Process Model, holds that emotions are instantiated when dynamically varying appraisal check outcomes causally determine the adaptive synchronization of five different response systems: (i) the cognitive component, which is an appraisal, or the "evaluation of objects and events"; (ii) the neurophysiological component, which triggers "bodily symptoms"; (iii) the motivational component, which prompts action tendencies for the preparation and direction of motor responses; (iv) the motor expression component, which is "facial and vocal expression"; and finally (v) the subjective feeling component, which is the "emotional experience", that is, "the conscious reflection of the changes in all components" (Scherer and Meuleman 2013: 2). The Component Process Model is relevant to my discussion because it illustrates that emotion is a cognitive process closely related to attitudes, norms (as in the cognitive component) and motivation (as in the motivational component).

Given that the current chapter deals with social and cultural issues such as immigration and language contact, applying a sociocultural (constructivist) perspective to emotion along with a cognitivist one is fundamental when looking at what constitutes it. Gordon (1981), for example, describes four features that constitute an emotional experience: (i) bodily sensations, (ii) expressive gestures, (iii) social situations or relationships and (iv) the emotion culture of a society. An emotion culture includes emotion vocabularies, beliefs, and norms and it impacts each of the other three features (Gordon 1981). It also varies over time and across societies (e.g. Wierzbicka 1999). Emotions can thus be seen as social constructs, the result of subjective as well as culturally circumscribed definitions of situations and appraisals (Arnold 1960; Boyns 2006).

In order to develop a full understanding of emotion as a concept, one must examine a society's or group's emotion culture and investigate the relationship between the component of the emotion culture (e.g. language, attitudes and norms) and the emotional experience of members of a particular social group. Herein lies the difficulty and complexity of studying emotions. Nevertheless, several researchers have constructively examined the

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content of emotion culture for specific emotions, for example, Peterson (2006) references Lofland's work (1985) on grief and Clark's work (1997) on sympathy. Clanton (2006) has shown how fear of envy is higher in preindustrial than in industrial societies, higher in rural than in urban communities, and higher in recently arrived immigrant groups than among native-born Americans. This indicates that immigrant or minority communities, being tied to diverse social networks and usually overwhelmed by the painful feelings associated with their minority status and identity disconfirmation, experience emotions different from others (e.g. majority communities). Yet what is needed in the field is an investigation of a broader scope of emotions in diverse contexts.

In the language learning literature, except for studies of language anxiety, specific emotions have not received sufficient attention, as the core focus has often been placed on motivation, in the case of psycholinguistics, and on attitudes, in the case of sociolinguistics. Therefore, the nexus of interrelations between these key concepts has also been overlooked. Based on the definitions and features discussed above, it is reasonable to argue that emotion can be the driving force behind motivation, attitudes and norms and vice versa. It "might be the fundamental basis of motivation, one deserving far greater attention in the language learning domain" (MacIntyre 2002: 45). Although emotion and motivation have much in common and both play an important role in directing thoughts and behaviors (cf. Lazarus 1991), they are not the same but mutually influential. "Emotion can facilitate motivation and help define desired goals, while failure or success in motivated goal pursuit can also cause emotional response" (Sands, Ngo, and Isaacowitz 2016: 336). Emotion can thus motivate people to respond to stimuli in the environment (e.g. norms and attitudes) which helps improve the chances of success and survival (e.g. language learning or language maintenance).

1.2 Positive and negative emotions

Having both physical and psychological dimensions, emotions exist for a reason – each emotion has a purpose (MacIntyre 2002). Solomon (1980) recognizes only two types of emotions at the most basic level, positive (pleasant) and negative (aversive). Since Fredrickson (1998, 2001, 2009) developed the Broaden and Build theory of positive emotion, potentially rich and powerful avenues for research have flourished in the field of positive psychology. Fredrickson (1998) illustrates that positive emotions can foster creativity and lead people to try new things, while they actively produce health and well-being in the absence of negativity (Fredrickson 2001). The action tendencies produced by negative emotions, on the other hand, powerfully dispose a person to a specific action (see Fredrickson 2013). For instance, anxiety leads to the urge to avoid situations that trigger anxiety, anger leads to the urge to impair progress in one's life, and disgust leads to rejection, as in reflexively spitting out spoiled food.

Recent developments in second language acquisition (SLA) highlight the importance of positive emotion in classroom contexts (MacIntyre and Gregersen 2012; Dewaele and MacIntyre 2014; Gregersen, MacIntyre, and Meza 2016). These developments contribute to an interest in applications of positive psychology in SLA and in theories related to positive

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emotion (MacIntyre, Gregersen, and Mercer 2016; MacIntyre and Mercer 2014). Particularly "the positivity ratio" (Fredrickson 2013) is considered to provide a "way to capture succinctly the notion that positive and negative emotions interact and, to the extent that persons tend to experience positive emotions more often than negative ones, correlate well with language learning motivation" (MacIntyre and Vincze 2017: 82). Emphasizing the power of positive emotion, MacIntyre and Gregersen propose the following for teachers: "By invoking the imagination and using the power of positive emotion, teachers can provoke learners to respond to the dissonance found within their possible selves and to effectively summon the cognition that modifies the emotional schema, especially debilitating negative-narrowing reactions, using systemic desensitization and other building and broadening techniques" (MacIntyre and Gregersen 2012: 211).

Psychologists have paid more attention to negative emotions, such as anxiety, behavioral disorders and depression, than to positive emotions (Gilman and Huebner 2003). According to Held (2004), arguments initially against the positive psychology movement were concerned with its perceived emphasis on the positive and its exclusion of the negative. Building upon this insight, Linley et al. (2009) argue that an important step for positive psychology applications is integrating the positive and negative, and applying this integrative approach to traditional areas of psychology in order to understand and improve quality of life, such as applying it to the treatment of depression (Seligman, Rashid, and Parks 2006). In multicultural and immigrant contexts, emotion is particularly linked to research on life satisfaction as the cognitive component of well-being (López et al. 2005) and on emotional acculturation (De Leersnyder, Mesquita, and Heejung 2013), which refers to changes in emotional patterns due to an immigrant's exposure to and contact with a new cultural context.

From a sociolinguistic perspective, we are seeing an increasing interest in emotion-relevant research, following scholars from diverse and often converging perspectives such as language and identity (Norton 2013), sociocultural approaches (Garrett and Young 2009), language socialization (Garrett and Baquedano-López 2002), language and desire (Motha and Lin 2013), and narrative perspectives (Baynham and De Fina 2005; Pavlenko 2005, 2006; Prior 2011; see Prior [2016: 3] for a complete overview). Although the importance of emotions in L1 attrition is generally acknowledged, work in the area tends to focus on attitudes, identity, or motivation, with only minor attention being paid to emotions (Ben-Rafael and Schmid 2007; Prescher 2007). Reviewing the literature on language attrition, Ben-Rafael and Schmid (2007) conclude that studies examining the possible link between emotive factors and language attrition have so far been inconclusive and insufficient and in order to obtain clearer findings on this link, investigations should contrast different immigrant populations. Likewise, the role of positive and negative emotions in language maintenance and language shift has largely been neglected and requires exploration and special attention. The following section delves into the research on language contact phenomenon and the main approaches to the study of language maintenance and language shift in immigrant contexts both in sociolinguistics and in social psychology.

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2 Language contact, language maintenance and language shift

The ultimate result of language contact must either be stable bilingualism – that is, maintenance of the two (or more) languages in some form – or shift, whereby the community eventually uses one language over the other. Language maintenance is defined as the process in which immigrants' heritage language continues to be used over successive generations, and language shift is the process by which an immigrant community gradually stops using one of its two languages in favor of the other (Fishman 1972). The more favorable language is almost without exception that of the socially or economically dominant group, that is, the majority language.

Numerous studies of language maintenance and language shift have grown out of the literature on language contact and the study of the languages and communities of bilingual speakers, including early studies in sociolinguistics such as Weinreich (1951), Ferguson and Gumperz (1960) and Labov (1984). In his pioneering book, Weinreich suggests that it is only in "a broad psychological and sociocultural setting that language contact can be best understood" (Weinreich 1953: 4). He distinguishes between nonstructural factors of language contact on the macro (societal) and micro (individual) levels as follows: Factors on the macro level include the size of the bilingual group, its sociocultural homogeneity, demographics, social and political relations between different groups of the community, stereotypes of each language, the prestige of the language and/or the indigenous or immigrant status of the language concerned. Factors on the micro level relate to the speakers' facility of verbal expression in general, their ability to distinguish between the two languages when speaking, their proficiency in each language, the manner in which each language is learned, and their attitudes toward each language. Weinreich's classification further indicates that although language contact situations are mostly treated as a sociolinguistic phenomenon, they are also subject to psycholinguistic perspectives, particularly at the micro level. From a psycholinguistic perspective, researchers should consider not only manners and attitudes but also emotions and emotional reactions, especially in immigrant or minority contexts where tension can occur between the minority and majority communities due to power imbalance and issues of identity.

2.1 Approaches to the study of language maintenance and language shift

In her review of the literature, Pauwels (2016) identifies three main approaches to the study of language maintenance and language shift that scholars have taken: (i) the sociology of language approach, (ii) the anthropology of language approach and (iii) the social psychology of language approach.

The *sociological approach* is clearly associated with Fishman (1972), who describes it as "focus[ing] on the entire gamut of topics related to the social organization of language behavior, including not only language use per se but also language attitudes and overt

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behaviors towards language and language users" (Fishman 1972, cited in Pauwels 2016: 29). Fishman identifies two major foci: describing who speaks what language to whom and when, and exploring differential rates of change in language use across groups.

Gumperz and Hymes (1964) and Gal (1979) were pioneers in developing the *anthropological approach*: "undertaking detailed studies of language use and behaviour in (smallish) communities and groups" (Pauwels 2016: 30). Although such studies are also guided by exploring who speaks what language to whom, when and why, the methods to obtain insights into language maintenance and language shift are quite different from those employed in the sociology of language approach in the sense that the anthropology of language approach does not use quantitative data, but more frequently uses ethnography. In this chapter, therefore, these two approaches are classified as "sociolinguistic", considering that the focus they adopt is similar, albeit methodologically they differ.

The third approach is the *social psychology of language* approach developed by Giles, Smith, and Robinson (1980). It focuses on "the ways in which the thoughts, feelings, and behaviors of others are influenced by the actual, imagined and implied presence of others and by the sociostructural forces operating in society" (Giles, Smith, and Robinson 1980: 2). According to Pauwels (2016), "in the context of language maintenance and language shift, this approach has been particularly helpful in highlighting how beliefs and attitudes that individuals and groups hold may influence their behavior" (Pauwels 2016: 29). While sociolinguists describe the norms of linguistic behavior and their potential linguistic, social, cultural and political sources in speech communities through sociology, they do not, in examining language maintenance and language shift, account for individuals' psychological reactions to immigrant or minority experiences (for instance, experiences related to identity and culture, norms, ideologies, inequality and so forth) (Giles and Fortman 2004). This lack can also be linked to the absence of a focus on emotions. It is, all in all, clear that sociology and social psychology make important contributions to our understanding of language maintenance and language shift (see Maitz 2011). In the following section I summarize these contributions.

2.1.1 Factors affecting language maintenance and language shift: sociolinguistics

There are a number of sociolinguistic models that advance the investigation of language maintenance and language shift (Bourdieu 1983; Clyne 1991; Edwards 1992; Fishman 1972; Weinreich 1953), and Potowski (2013) has identified four categories of factors outlined by these scholars in language maintenance and language, although they should also be seen as interdependent:

1. Individual factors involve behaviors of individual speakers, for example, proficiency, language choice and attitudes toward learning/using the minority or majority language (Edwards 1984; Gibbons and Ramirez 2004; Haugen 1956; Romaine 1995).
2. Family factors include the role of family in language use and practices, for example, a family's language policy, parents' roles, grandparents' roles and family attitudes toward bilingualism (Braun 2012; De Houwer 2015; Curdt-Christiansen 2009; Lanza 2007).
3. Community factors concern the size and distribution of an ethnic group, the role of neighborhoods, schools and social networks in language use and practice (Li 1994;

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Milroy 1980; Portes and Rumbaut 2001), normative standards and community attitudes (Labov 2006; Pauwels 2013; Ravindranath 2009; Trudgill 1972).

4. Broader societal factors relate to the linguistic social climate, or linguistic culture, norms in a society, political factors, and the policy of the host community toward minority languages (Schiffman 1996; Spolsky 2004).

Most of these factors are linked to attitudes, while community factors are additionally associated with normative standards. However, emotion has never been considered a central factor influencing language maintenance and language shift in sociolinguistics. This gap raises the concern whether emotion might have mistakenly been subsumed under "attitude" particularly at the individual level. Before discussing the role of emotion in language maintenance and language shift, we turn our attention to the two concepts, norms and attitudes.

To what extent norms in a society favor linguistic or cultural diversity is an important question to deal with, because the answer may ultimately influence whether or not a minority language can be maintained. Based on a normative standard, majority communities evaluate minority communities and influence minority language maintenance, often in negative ways (Potowski 2013). The concept of prestige can also be linked to the idea of norms in that sense, as prestige languages are often tied closely to a standardized language. Given that bilinguals are often expected to function with "nativeness" in a monolingual way in every language they acquire (cf. Grosjean 2008; Ortega 2010), especially in an immigrant context, negative pressure on bilinguals coming from either the immigrant or mainstream community may occur. Individuals that diverge significantly from the norms of that language will not meet the cultural norms and expectations of their speech community. When expectations create social pressure to conform to norms, they will pose linguistic, social and psychological challenges for language maintenance of minority communities. The pressure for immigrant communities to follow norms and join mainstream society may lead immigrant families to forego language maintenance (Canagarajah 2008). Potowski (2013) provides the example of Albanians in Italy who have maintained their heritage language better than Albanians in Greece because of cultural ideology, as Greece is said to exert more pressure on a normative standard than Italy (Hamp 1978).

Minority communities may experience language maintenance differently due to variations in their system of values, for example, identity (Edwards 1984), but their geopolitical location also plays into this. For instance, investigating acculturation and language orientation among Turkish immigrants in five countries, Yağmur and Van de Vijver (2012) reveal that in comparison to Turkish immigrants in Germany, France and the Netherlands, Turkish immigrants living in Australia demonstrate the least maintenance and the most adjustment, because they experience the least pressure to assimilate. Turkish immigrants, who are known to treat their heritage language as a core marker of ethnic identity (e.g. Extra et al. 2001), seem to accept the challenge to maintain the heritage language by resisting pressure from the mainstream society. Therefore, it cannot be presumed that communities exposed to the pressure of a normative standard will be likely to undergo language shift toward the majority language (cf. Hamp 1978).

Moving on to attitudes, let's recall our working definition: An attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor

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or disfavor (Eagly and Chaiken 1993). The point here is that a person must be presented with an idea or experience in order to have an attitude toward it. Thus, while attitudes are held by individuals, an individual's attitudes can strongly be shaped by those of the local society, their subjective norms and linguistic prestige (Potowski 2013). Another point to make here is that attitudes can also be shaped by individuals' emotions, since attitudes have emotional components. That is to say, emotion can be the source of a particular attitude, and so it can be a direct or indirect source of a behavior (e.g. language use).

In examining how attitudes influence language maintenance and language shift, past research has emphasized the strong association between language attitudes and actual language skills; positive attitudes toward one's heritage language often result in increased efforts in learning/maintaining it and in higher proficiency levels. However, it is also necessary to ask whether positive attitudes are enough for language maintenance to occur. For instance, it has frequently been reported that Spanish speakers in the United States feel positively about Spanish, but almost all of them shift to English by the third generation (Zentella 1997; Potowski 2013). Concerning negative attitudes, Kuncha and Bathula (2004) found that more than half of the Telugu-speaking mothers and children in New Zealand in their study felt it was a "waste of time" to learn Telugu and they shifted to English after an average of just two years (cited in Potowski 2013: 322). Therefore, it is often concluded that although positive attitudes are not enough to guarantee language maintenance, negative attitudes often lead to a rapid shift away from use of that language (Potowski 2013). Yet, can it always be so clear-cut? Zhang and Slaughter-Defoe (2009) provide an example of the challenges of language maintenance and language shift for Chinese families living in the United States. With strong positive attitudes toward the heritage language (Chinese), Chinese parents were willing to spend considerable time, money, and energy to help their children maintain Chinese. In spite of this, only a few Chinese children saw the heritage language as important, to the great disappointment of their parents. Most Chinese children, especially older children, felt Chinese was something they had to learn to obey their parents, yet they themselves did not feel it necessary or important (cited in Potowski 2013: 327). What we see here is that these Chinese bilingual children did not hold either a positive or a negative attitude toward learning Chinese, but they apparently lacked motivation, perhaps an emotional bond with the Chinese language and culture. This example shows that in studying language maintenance and language shift, focusing only on attitudes is not sufficient as other societal and psychological factors are also at play. When examining attitudes, researchers should not ignore the important role of self-evaluation in terms of attitudes, motivation and emotional reactions to norms and an individual's own intentions and experiences in the process. Otherwise, many questions will remain unanswered such as "why these Chinese children should form such learning attitudes and why their parents fail to transmit the positive home language attitudes they themselves hold to the next generation" (Zhang and Slaughter-Defoe 2009: 88).

2.1.2 Factors affecting language maintenance and language shift: social psychology

According to social psychologist Maitz (2011), sociolinguists have identified three features related to the factors involved in language maintenance and language shift: (i) "the ex-

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traordinary diversity of the factors", (ii) "the accidental nature of their roles" and (iii) "their often unpredictable impact on language choice outcomes" (Maitz 2011: 154; cf. Fishman 1972; Gal 1979; Romaine 1995). Critically analyzing this array of literature, Maitz argues that "exactly due to these features, it is hardly likely to bring research closer to creating a universal theory of language shift" (Maitz 2011: 154).

The most influential initiatives in social psychology are the ecology of language (Haarmann 1986; Haugen 1972), accommodation theory (Giles and Smith 1979; Niedzielski and Giles 1996) and ethnolinguistic vitality, also known in its developed version as subjective ethnolinguistic vitality (Giles, Bourhis, and Taylor 1977). Yet despite their unquestionable merits, the critical afterlife of these initiatives has revealed a number of issues and contradictions. Similar to sociolinguistics, "many of these contradictions in social psychology also stem from the fact that they are unable to treat the diversity of the factors which potentially determine language shift; they overgeneralize in that they do not take account of factors which can be relevant in the case of certain communities or even universally" (Maitz 2011: 154). In the context of this chapter, I argue that emotion is one of the factors that is often not taken into account when examining language maintenance and language shift.

Maitz (2011) uses the Theory of Planned Behavior (Ajzen 1991) and, its earlier version, the Theory of Reasoned Action (Fishbein and Ajzen 1975) to explain language maintenance and language shift through social psychology. The Theory of Reasoned Action derives human social behavior from three factors: intention, attitude toward the behavior and subjective norms, which are influenced by two further factors, motivation and normative beliefs (i.e. other people's expectations from the individual).

The Theory of Planned Behavior, on the other hand, adds the variable of perceived behavioral control (see Figure 64.1) to the factors presented in the Theory of Reasoned Action. In causing a specific behavior, which is language maintenance or language shift in our context, normative beliefs and motivation interact with subjective norm (the perceived social pressure), while subjective norm, attitude toward the behavior and perceived behavioral control interact with each other. Note that perceived behavioral control refers to someone's ability to perform or control a particular behavior (e.g. one's language practices) and it can directly lead to human behavior on its own, regardless of the rest of the factors.

Both theories stress the importance of intention in language maintenance and language shift, suggesting that a speaker undergoes language shift if and only if (s)he intends to do so (Maitz 2011). Therefore, the behavioral intention is crucial, as it directly determines the outcome of language contact situations, language maintenance or language shift. In the Theory of Reasoned Action, subjective norms and attitudes toward the behavior lead to intention, which then directly influences behavior, causing language maintenance or language shift. The Theory of Planned Behavior, on the other hand, suggests that influencing the behavior on its own, that is, perceived behavioral control, can directly cause language maintenance and/or language shift. For instance, even when attitudes and subjective norms are negative toward language shift, if an individual thinks that (s)he can eventually solve all the problems brought on by language shift (such as the pressure from the family or ethnic community to maintain the heritage language), (s)he can carry out the behavior, that is, language shift.

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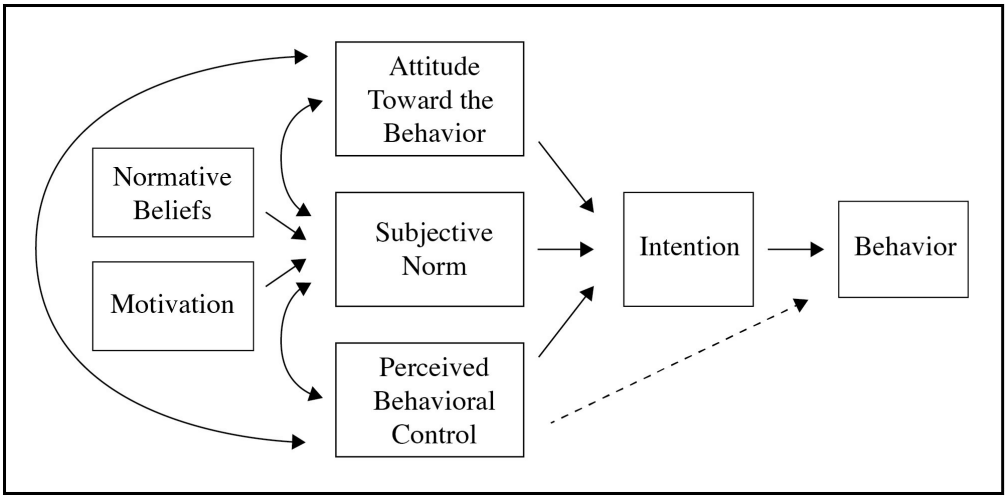

Fig. 64.1: Theory of planned behavior (based on Stroebe et al. 1996; Frey et al. 1993, cited in Maitz 2011: 163).

Ultimately, through this structure, Maitz (2011) summarizes how language maintenance and shift could be explained by social psychology, yet again placing a clear focus on norms and attitudes, along with other important psychological constructs such as intention, motivation, normative beliefs and perceived behavioral control. This also shows us that studies in social psychology, just as in sociolinguistics, do not account for emotions as a unique and fundamental component of language maintenance and language shift. Drawing on Figure 64.1, it is safe to conclude that "perhaps the most frequently mentioned biasing factors ostensibly neglected in the Theory of Planned Behavior are affect and emotions (Conner and Armitage 1998; Rapaport and Orbell 2000; Richard et al. 1998; Wolff et al. 2011)" (cited in Ajzen 2011: 1116). Ajzen (2011) responds to this concern as follows:

> This concern is based in part on the mistaken perception that the theory posits a rational actor who is unaffected by emotions and in part on the standard methodology that is typically used to operationalise the theory's constructs. In the [Theory of Planned Behavior] affect and emotions enter in two ways. First, they can serve as background factors that influence behavioural, normative and/or control beliefs. [...] In addition, affective states can also help to select the behavioural, normative and control beliefs that are readily accessible in memory (Clark and Waddell 1983; McKee, Wall, Hinson, Goldstein and Bissonnette 2003). (Ajzen 2011: 1116)

According to Ajzen (2011), affect and emotions can therefore have direct effects on intentions and behavior, as well as on the strength and evaluative connotations of these beliefs, which can indirectly determine language maintenance and language shift. However, it is often suggested that affect and emotion can influence behavior more directly and that this possibility is not sufficiently accounted for in the Theory of Planned Behavior. Wolff et al. (2011), for instance, argue that anticipated regret and, more generally, anticipated negative affect can influence intentions and behavior independent of the other predictors in the Theory of Planned Behavior. It is reasonable to ask here whether negative emotions (i.e.

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regret, guilt, shame) would lead to rapid language shift, as argued by sociolinguists for the case of negative attitudes (cf. Potowski 2013).

3 Emotion and language maintenance/language shift in immigrant contexts

Emotion can be the most important predictor of motivational behaviors, indispensable in actual decision making. As MacIntyre (2002) writes, "given the pervasiveness of emotions, their role in energizing behavior, and their flexibility over time, it is clear that emotion forms a key part of the motivational system" (MacIntyre 2002: 63). Emotions can result in particular motivational behaviors of language learners such as continuing to try to solve a learning task because of a positive emotion or no longer trying because of a negative emotion (Scherer 2005; cf. Dörnyei 2005; Garrett and Young 2009; MacIntyre 2002). For instance, anxiety may influence language maintenance in a negative way, as DG, a Turkish immigrant mother living in the Netherlands indicates while describing her daughter's anxiety in the heritage language, Turkish:

(1) Interviewer: How do you think IK's [daughter] anxiety related to her Turkish is influencing her life?
DG: Well, she loses herself, she screams, yells, gets aggressive! Then, she shuts herself down, doesn't speak Turkish with me. [...] Seriously, sometimes she doesn't speak with me at all. So I am telling her: her Turkish is not improving, it is not the solution! We will never get rid of these problems like this! Especially for her, she needs to try to speak Turkish, so she doesn't hate it more.

(Sevinç and Backus 2019)

Based on DG's statement about her daughter's negative emotion (hate), it is fair to hypothesize that the more individuals use a language, the more positive their emotions may become in terms of their language skills. As Sevinç and Backus (2019) note, the interplay between language competence, language practices and anxiety creates a vicious circle. Anxiety leads immigrants to avoid using the language they are anxious about, whether the heritage or the majority language, which means less practice and social interaction in that language, which causes low proficiency. This in turn leads to further anxiety, and thus further avoidance of using the language. Emotions, therefore, affect the process or outcome of language maintenance and language shift, while they, in turn, are shaped by the process or outcomes of language maintenance and language shift.

Intercultural communication can often pose greater challenges than mastering a language, particularly in immigrant or minority contexts. One of the biggest challenges for immigrants is speaking their nondominant language with so-called natives – people from the mainstream society or from immigrants' so-called home country – who are likely to perpetuate stereotypes or other labels of bilingual immigrants (Sevinç and Dewaele 2016;

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Sevinç and Backus 2019). Associated with immigrant experience, daily sociolinguistic and socio-emotional challenges (e.g. language tension, discrimination, stereotyping, accusations of slipping in ethnic allegiances and social exclusion) can occur. The excerpt below, for instance, illustrates unequal power relationships, perceived ethnic exclusion, prejudice and inequality, causing anxiety for a Turkish immigrant when speaking Dutch, the majority language:

(2) At work, I experience that some Dutch people correct every little mistake of yours consciously just to show that they are Dutch, so they can do this to you. Some of them laugh at you if you use a wrong word and say "WE don't use this, WE use that!" So you feel discriminated, and despised (SVD, 26-year-old, second-generation).
(Sevinç and Backus 2019)

Based on standard norms and perceived social pressure, immigrant or minority contexts may trigger negative emotions such as shame, guilt, anxiety and embarrassment among immigrants in various social contexts. The wish to belong to a certain group is one of the most influential factors in the success of second language acquisition (Pavlenko 2005), and the concept of emotion plays a crucial part in it. In her valuable contribution to the field, Pavlenko (2005, 2006) demonstrates that bilinguals' sociolinguistic histories heavily influence their emotions. Negative experiences, such as discrimination, can result in negative emotions, which can, in turn, result in a person no longer speaking one language, which will eventually influence the process of language maintenance and language shift. The case of Lerner, who arrived in the United States in 1939 as a 19-year-old Jewish refugee, illustrates the impact of negative emotions on bilinguals' attitudes, language use and preferences. As Lerner said, "The truth was, I no longer wanted to speak German; I was repelled by the sound of it; for me as for other Americans it had become the language of the enemy. I ceased speaking German altogether" (Pavlenko 2005: 192). After the Nazi rise to power, she embraced English with the same gratitude and fascination that she embraced America, she refused to use German, to speak it to her children, or to read German books; eventually she experienced profound language attrition (Pavlenko 2005). What we see here is that Lerner's negative experiences and emotions affected her attitude toward maintaining German. Schmid (2011), on the other hand, gives an example illustrating that positive emotions affect language learning: "Someone who has a deeply-felt love and admiration for Dutch society, and a desire to be as Dutch as possible, will probably eventually become better at speaking Dutch than someone who has to learn some Dutch only because she has to spend a couple of years in Rotterdam for her work" (Schmid 2011: 97).

Emotions are often considered as the affective component of attitudes along with the other two components, cognitive and behavioral. As MacIntyre (2002) notes, "attitudes alone are not likely to be sufficient to support motivation. The role that emotion, to the extent that it can be split off from attitudes and motivation, plays in the language learning process has yet to be widely studied" (MacIntyre 2002: 63). Attitudes may be shaped by pleasant or unpleasant sensations involving simple positive or negative feelings. However, this attitudinal component "represents only a tiny subset of the emotions and feelings of interest to the experiential view" (Holbrook and Hirschman 1982: 136). Holbrook and Hir-

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schman's (1982) concern over the absence of emotion in attitude research raises a major question about behavioral explanation and prediction: If the attitude construct reflects only a tiny subset of emotive experience, the behavioral prediction would suffer. Therefore, it is safe to emphasize that emotion, which controls some of our mental processes (Schumann 1998), needs to be investigated as a unique factor in language maintenance and language shift studies, in that it directly influences human behavior, as in the following example.

SLD, a second-generation Turkish immigrant living in the Netherlands, returned to the Netherlands from a visit to Turkey angry, frustrated and disappointed, no longer wishing to maintain Turkish and her Turkish identity:

(3) SLD: I lost my passport in Turkey, panicked and terrified I ran to the closest police station, and tried to explain my problem to the policeman over there. As I was agitated, I think my Turkish got worse, [it] sounded foreign. The police officer asked me "are you Turkish?" I said "yes, but my passport is Dutch, I live in the Netherlands." Then, he said "oh you the Turks [living] in Europe, why don't you speak proper Turkish?" [...] I got shocked! Is this the only problem here now? I just left and went to the Dutch Embassy in Istanbul, they took me seriously and solved the problem. [...] Why shall I protect [keep] Turkish [the language] and my identity, really? To be treated like this? [...] Just because of these [experiences] I don't go to Turkey anymore.

(Sevinç 2017, unpublished data)

In this excerpt, it is, first of all, worth noting that one's language performance can be immediately influenced by negative emotions, in such a way that SLD felt agitated and her Turkish got worse. Second, the Turkish police officer reproduced subjective norms and evaluated SLD's language and identity by asking her "are you Turkish?" and "why don't you speak proper Turkish?". Perhaps most crucially, from a social psychological perspective, we can observe that deviation from standard norms can lead to the perceived social pressure that triggers negative emotions among immigrants that directly affect behavior, as evinced by SLD's decision to no longer maintain the Turkish language and reject her Turkish identity.

Immigrants' language use and competence in both languages is often evaluated with reference to monolingual-standard norms. Self-perceived low proficiency and other factors appear to typecast immigrants as less than perfect members of their speech communities. This subjects immigrants to discrimination, stereotyping, and accusations of slipping ethnic allegiances and problematic moral commitments. As a result of social and cultural concerns, immigrants who do not meet the expectations of their speech community experience negative emotions related to their language and identity. These negative emotions can remain an ever-present and unavoidable circumstance of immigrants' lives and a part of their identity.

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4 Summary and concluding remarks

The current chapter draws attention to a gap in the research of language contact. It shows that social and cultural forces of a language contact situation have been the main interest of language contact studies, while psychological aspects of language contact, particularly the central role of emotion in language maintenance and language shift, have been overlooked in both sociolinguistics and social psychology. This gap indicates that we are still far from achieving Weinreich's vision of a unified framework to integrate the linguistic, social, cultural and psychological aspects of language contact.

For a better understanding of language maintenance and language shift, sociolinguists need to more carefully apply terms, notions, and theories of psychology (cf. Maitz 2011). This understanding also requires further investigation of individuals' psychological reactions to immigrant or minority experiences, with a special focus on emotion. Research should examine emotion as a fundamental component of language maintenance and language shift, since emotions, positive, negative or mixed, can penetrate down to the deepest levels of an immigrant's sense of self. Emotion can be one of the reasons for, as well as the result of, language maintenance and language shift. Because emotion directly influences human behavior, it can be considered as an independent and compelling factor in determining the success or failure of language maintenance.

It is also conceivable that emotion is a cognitive process affected by attitudes, norms and motivation during intercultural communication, particularly in immigrant contexts. The interplay of these variables is usually dynamic and complex. Although this chapter draws necessary attention to the role of emotions in language maintenance and language shift in immigrant contexts, effects of negative and positive emotions on language maintenance and language shift and the interplay of norms, attitudes, emotion and motivation still require further investigation in the field. Future research should embrace a comparative approach to examine the effects and interplay of these variables across diverse immigrant populations and contexts – for instance, where the pressure of a normative standard is high or low. A comparison of emotion cultures (language, attitudes, identity and norms) and emotional experiences (i.e. positive and negative) with differential rates of change in language use across different immigrant groups (cf. Fishman 1972; Gordon 1981) can help resolve the contradictions in the existing literature on language shift in sociolinguistics and social psychology, as discussed in this chapter.

In order to deal with the issues raised by affective reactions and better understand the breadth of facilitative and debilitating emotional processes in immigrant contexts, we need sociological, linguistic and social psychological approaches, but most importantly, a particular focus on psychology is needed if we are to better investigate the role of emotion in language maintenance and shift. Recent trends in the emerging science of positive psychology, for instance, the Broaden and Build theory of positive emotion, can be applied to the study of language maintenance and shift in immigrant contexts. As noted by Held (2004), it is important that negative emotions are included in positive psychology applications and that an integrative approach to understanding and improving the human condition is followed, such as applying positive psychology in the treatment of negative experiences (Seligman, Rashid, and Parks 2006). These applications can also help immigrants break

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the vicious circle of language knowledge, language use and negative emotions or prevent immigrants' debilitating negative-narrowing reactions toward their own language use, which are likely to cause language shift. For instance, anxious behaviors can be decoded by immigrant groups through positive emotions such as enjoyment (cf. Dewaele and MacIntyre 2014).

The scope of positive and negative emotions as examined in recent research in SLA should be moved beyond classroom settings in order to be adapted to immigrant situations. Notably, immigrants' experiences are often complex and may not always be simplified to one or two emotions. Concurrent experience of positive and negative emotions, namely mixed emotions, should not be neglected in immigrant contexts, considering the fact that individuals can simply experience both positive and negative emotions at the same time (e.g. joy and guilt, happiness and fear). Methodologically, an interdisciplinary approach that combines quantitative, qualitative data and physiological data recordings can be beneficial to shed further light on the link between specific emotions and language use in different social settings (cf. Sevinç 2017). Finally, it is essential to remember that perceived pressure can be provoked not only by the mainstream community but also by the so-called home country. Based on the specific content of a society's or group's emotion culture, alarmist attitudes in immigrants' home countries toward emigrants may also influence immigrants' emotions. When investigating the key concepts of language maintenance and language shift (attitudes, norms and emotion) researchers should also take into account individuals' emotional experiences and reactions in their "original" country.

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