The Pragmatics of Adaptability

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Introduction

The ability to form and transform in pragmatics

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> [C]ontrary to what is too often assumed, contemporary neurobiologists claim that the elements of cognition are not in fact innate. These elements develop and appear as a result of the constant interaction between the internal milieu and the environment. This type of interaction fundamentally defines rationality as adaptability – an adaptive power (…) to form and transform.
>
> (Catherine Malabou, 2016, *Before Tomorrow: Epigenesis and Rationality*, p. 10)

1. Adaptability and pragmatics

Adaptability, the ability to be formed and transformed over a course of time, is a fundamental concept for pragmatics. If, as Bar-Hillel (1971) suggested long ago, we conceive of pragmatics not as the "waste-basket" where unexplained bits and pieces of syntactic and semantic phenomena are discarded, but as a domain where problems of language are explained vis-à-vis users' sensibility in handling them in their ordinary lives, then the question of how users continuously adapt form and meaning in principled ways turns out to be a cardinal one. All languages of the world dispose of grammatical, semantic, pragmatic and discursive resources with which their users adapt linguistic forms to particular contexts. In transitioning across languages, modalities, registers or discourse genres, people normally adapt utterances according to their interests, the social and historical conditions of the situation, and the linguistic and material resources available to them.

To a lesser or greater extent, most linguistic phenomena involve some degree of adaptation. For instance, translation is a mode of adapting messages within or across languages and semiotic systems (Jakobson 1959), entextualization is the process by means of which a linguistic unit is detached from an interactive context and adapted to a new one, thus becoming a new (and adapted) text (Bauman & Briggs 1990), evidential marking is a species of adaptive process in which a linguistic form is deployed to index "the relation between the speaker, the object or event

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spoken about and the linguistic act of producing the 'evidential utterance'" (Hanks 2012: 169), linguistic change is adaptive change in the sense that it combines linguistic and social factors in producing new structures, sometimes a new language, in a historical process often induced by "the history of its speakers" (Thomason & Kaufman 1998: 4).

We could easily stretch the list of linguistic phenomena above by emphasizing how users grapple with the adaptation of different language resources. Yet at the same time that this recursive game of definitions is fun, it reveals that such a general and pervasive notion such as adaptability may require some specification if we want to discuss its importance for the social life of language. In this book, we start our narrowing of the problem of adaptability by acknowledging, with Verschueren and Brisard (2009: 8), that adaptability is "a key concept for a theory of pragmatics" (see also Verschueren 2018, 2019). Hence this book, in assuming that pragmatics "studies the use of language in human communication as determined by the conditions of society" (Mey 2001: 6), takes adaptability to be a crucial concept for understanding the social bond that makes language possible. Like other species, humans are social beings; but our sociality differs from all other animal species in the sense that we adapted a complex apparatus, *language*, that not only facilitated our sociality (for instance, by being able to provide others with important, out-of-immediate-reach information about survival) but that also turned us into a *symbolic species*, as Terrence Deacon (1998) aptly termed the genus homo sapiens.

Even though this book frames adaptability in language socially, the very concept of adaptability inevitably takes us to biology. It invokes such questions as the origins of language as a symbolic system of signification, as well as the likened question of how we as biological beings evolved into what we are today, given the affordances that our species acquired through the interaction with the environment, with other conspecifics and other species alike, and with the symbolic systems that different lineages of the *homo* species gradually carved out. As Verschueren and Brisard (2009: 29) insightfully comment, this link between adaptability as an evolutionary concept and pragmatics is "both a useful and a potentially pernicious one." It is useful, the authors claim, because the ability to use language is obviously an adaptive process – as we discuss in the next section, according to archeological, biological and historical-linguistic research, language seems to have emerged at least half a million years ago (and at most a million years ago), within the space of *homo erectus* and our common ancestor with the Neanderthals and Denisovans, as part of technical and symbolic refinements carried out by our relatives and modern humans (Dediu & Levinson 2013; Levinson 2016). But it is potentially pernicious, according to Verschueren and Brisard, when the notion of biological adaptation is transposed to the field of language without a careful consideration of the properties of the adaptive processes that are specific to language.

Indeed, borrowing concepts from biology is as old as linguistics itself. In the 19th century, for instance, the German linguist August Schleicher unambiguously paired *natural languages* and *living organisms* in his *Darwinism Tested by the Science of Language*, originally published in 1863. Like other biological species, languages would be subjected to the same natural laws of evolution. In his own words:

> Languages are organisms of nature; they have never been directed by the will of man; they rose, and developed themselves according to definite laws; they grew old, and died out. They, too, are subject to that series of phenomena which we embrace under the name of "life." The science of language is consequently a natural science; its method is generally altogether the same as that of any other natural science.
> (Schleicher 1869: 20–21)

As we know, Saussure was opposed to the principle – held by Schleicher and many linguists from the 19th century – that lodges the explanation of the functioning of a given stage of a language in its origins or in its evolution. To justify his synchronic method of linguistic analysis, Saussure wrote that "no society has ever known its language to be other than something inherited from previous generations, which it has no choice but to accept. That is why the question of the origins of language does not have the importance generally attributed to it. It is not even a relevant question as far as linguistics is concerned" (Saussure 1986 [1916]: 72). The relevant question for Saussure – which certainly marked his contribution to the change of direction in modern linguistics – would be the study of language's "own order," a set of immanent and synchronic laws that were indifferent both to history and to evolution. For him, understanding the working of language would be analogous to understanding the functioning of the game of chess: if one wants to play chess, it is irrelevant to know that it was invented in Persia and then migrated to Europe and other parts of the world; rather, if one wants to know how to play it, what is necessary is to know that chess is a system with specific rules. Thus, for Saussure, the specificity of language would lie not in the characteristics it inherits from its origins but in the fact that "the language itself is a system which admits no other order than its own" (p. 43).

Barely a century after Saussure's invocation of an independent "proper order" of *la langue*, as opposed to the indexicality, or contextual sensitivity of *la parole*, linguistic pragmatics had already established itself as a perspective by flipping the Saussurean coin and privileging the contextual adaptability of the facts of everyday speech (see Haberland & Mey 1977; Levinson 1983; Verschueren 1999, 2019; Hanks, Ide, & Katagiri 2009; Senft 2014; Hanks 2018). Thus, for pragmatics, the question of the specificity of adaptability in language that we raised above is not linked to some variability immanent to language – as Saussure would have claimed – but to a type of variability that is fundamentally generated and constrained by communicative practices (Hanks 2018). As Hanks (2018: 230) defines them, communicative practices are constituted by three elements: "language as a semiformal system, communicative activities as semistructured processes, and actors' evaluations of these two."

Language users are continuously making choices that simultaneously involve all three elements – communicative practices being the moment of synthesis of them. First, users grapple with a linguistic structure that has specific formal properties. Yet, this structure is not independent from "ongoing pressures of discourse" (Verschueren & Brisard 2009: 29; Ochs, Schegloff & Thompson 1996). Choices in this level of a communicative practice are predicated in the generative potential of the phonology, lexicon and morphosyntax of a (or some) given language(s) in use, but also in the access to those generated structures – something that partly depends on symbolic capital, social position and contextual affordances (Bourdieu 1977; Mey 2010). Second, users engage with others in social activities having a past and a future. Time is thus an important vector in the determination of a communicative practice's meaning. As Hanks comments, a long pause by someone after the invitation from a new friend to go out may have consequences for the interpretation of the speech act in question – something that a purely formal model tends to ignore; formal theories normally exclude time from their description of language form. Needless to say, the speech act at stake – an invitation to go out – is embedded in a social world that constrains the activity of inviting someone, so disregarding the involving social scenario does not contribute to the comprehension of an activity's meaning. Third, users are constantly indicating how their utterances should be interpreted, how they received the utterances of others, as well as the social circuit in which these messages about messages circulate (see Briggs 2005, 2007). These meta-commentaries tend to focus on linguistic form – for instance, a user may have some doubt about a piece of information she heard from someone else by citing it in quotation marks, or by adding to the reported speech an adverb such as "allegedly"; as Jakobson (1985) and Silverstein (1993) differently put it, this metalinguistic discourse affects the very pragmatics of language (see Fetzer, this volume). "These evaluations," according to Hanks (2018: 230), "could be called *ideological* in the sense of embodying broader values, beliefs, and (sometimes) self-legitimating attitudes" (see also Briggs 1992; Woolard 2016; Saft, Tebow, & Santos 2018). Language evaluations are thus metapragmatic evaluations – the glue that sticks linguistic structures to social activities (Woolard 1998; D'hondt 2019).

In this book, we share the position that the adaptability of language is directed to, and shaped by, communicative practices. Translated to the terms of a socially oriented pragmatics (Mey 2001; Rajagopalan 2006, 2016), this means that adapting language is part of our using language daily as determined by the conditions of society, culture and cognition. In the next section, we will look at the growing interest in the evolution of language. As we have said, even though our approach to language in this book is social rather than biological, our point is that culture – and therefore also language and society – are entangled with biology in our continuing adaptation as a symbolic species (Deacon 1998). Recent findings in neuroscience, archeology and linguistics point out that biological adaptation is largely influenced by cultural adaptation – and this has consequences for how we may tackle today Verschueren and Brisard's (2009: 28) pioneering dictum: "Having emerged [as the result of evolution], language can also be said to function adaptively in its everyday manifestations."

2. Adaptability and biology

Stephen Levinson (2016) explains that "language evolution" was a forbidden expression in the 19th century, despite Darwin's successful notions about the evolution of species. As we commented in the previous section, Saussure's admonition about the irrelevance of evolution for understanding the system of language is an example of this disciplinary taboo. Strikingly, however, Darwin (1871) himself, in *The Descent of Man*, had traced parallel lines of evolution in languages and biological species:

> The formation of different languages and of distinct species, and the proofs that both have been developed through a gradual process, are curiously parallel… We find in distinct languages striking homologies due to community of descent, and analogies due to a similar process of formation.
>
> (pp. 89–90, cited in Atkinson & Gray 2005: 513)

These homologies were questioned by researchers at the time, causing the term 'evolution' to be officially banned from the Société de Linguistique de Paris in 1866 and unofficially from the Linguistic Society of America in 1924 (Levinson 2016: 309). As we know, in passing from the 19th to the 20th century, Saussure would offer a plausible theory of language based only on its purely synchronic system. Chomsky's early generative theory would follow this tendency by founding linguistic competence on an ahistorical base (see Croft 2008).

However, since the 1990s, archeologists, evolutionary biologists, historical linguists, and neuroscientists have dedicated their attention to the earlier forbidden subject of language evolution, which has prompted a prolific scientific production on the topic (Christiansen & Kirby 2003; Fitch 2010). Chomsky himself has written extensively about the theme (see Chomsky 2010, 2012; Berwick, Friederici, Chomsky, & Bolhuis 2013; Berwick & Chomsky 2016). Our aim in this section is to highlight some of these findings as they point to the hybrid, collective and plastic character of the adaptive formation of language in the evolution of the *homo* species. These three characteristics – hybridity, collectivity, and plasticity – still undergird the ways in which we, members of the current *sapiens*, simultaneously adapt language to our everyday activities and adapt ourselves to the affordances of language – which the chapters ahead entertain. But before turning to how the authors in the present collection handle language adaptability, we should head back to some hundreds of thousands of years ago.

Until recently, there has been a certain consensus among linguists, paleontologists and archeologists about language having emerged in the past 100,000 years. Along this line of theorizing linguistic evolution, many authors proposed a "saltationist hypothesis" for the emergence of language, i.e. a view that some genetic mutation yielded the capacity for language in modern humans, within the abovementioned period (Bickerton 2002; Mithen 2005; Chomsky 2010, 2012). Robert Berwick, Angela Friederici, Noam Chomsky and Johan Bolhuis, for instance, state that "the language faculty emerged suddenly in evolutionary time and has not evolved since" (2013: 89). Chomsky strongly believes that some unusual genetic mutation led to the sudden appearance of what he considers to be the core of language – recursive syntax –, whose principles are the same for the languages of the world, variations (i.e. parameters) being peripheral. In Chomsky's (2010: 59) words: "roughly 100,000+ years ago (…) a rewiring of the brain took place in some individual, call him Prometheus, yielding the operation of unbounded Merge, applying to concepts with intricate (and little understood) properties".

This saltationist view, which presupposes that facts of interaction, selection and adaptation play minor roles in the emergence of language, has been questioned by authors proposing a more gradualist and adaptive hypothesis. Dan Dediu and Stephen Levinson have gathered strong empirical evidence from genetics and archaeology to support this hypothesis (Dediu & Levinson 2012, 2013). On the basis of the empirical evidence from these fields and from the ethnographic record of human cultures, Dediu and Levinson (2013) argue that language emerged much earlier than the saltationists assume, at least some half a million years ago, as opposed to 100,000 years. This hypothesis of 'deep time' assumes that language did not emerge exactly among the sapiens, but was already in formation in lineages that preceded us. To linearize a story that is far from linear (see Klein 2009, and Dediu & Levinson 2013 for a more fine-grained account), the *homo* species split from chimps some 6 million years ago. In East Africa, *homo habilis* had evolved around 2.4 million years ago; by 1.8 million years ago, also in East Africa, a more advanced lineage had evolved, the *homo erectus*, which expanded towards Asia and Europe. Still in Africa, *homo erectus* evolved into *homo ergaster*, and then, some 800,000 years ago, into *homo heidelbergensis*. The latter is possibly the common ancestor of ourselves, the modern humans (*homo sapiens*) who evolved in Africa, and our now extinct sister lineages, the Neanderthals and Denisovans who evolved in Eurasia. These three lineages interacted, interbred and shared their cultures. Their genomes are "extremely similar, sharing the vast majority of innovations since the split from chimps" (Dediu & Levinson 2013: 4; see also Meyer et al. 2012). A gene that has been connected with the capacity for language, the FOXP2, is found both in *sapiens* and in the Denisovans and Neanderthals (Levinson 2016). If added to the biological and archaeologic record of interbreeding and interacting between *sapiens* and the two sister lineages, this genetic evidence points to the fact that the three lineages of *homo* were already using speech, and that their genetic foundations for language seemed to have "differed at most quantitatively" instead of qualitatively (Levinson 2016: 313). The archaeological record shows that the Neanderthals were used to glacial conditions, having developed technologies for enduring the period's harsh climate; they buried their dead, cared for the sick, used painting for ritual purposes, and produced sophisticated tools. Learning to reproduce a Neanderthal tool, for instance, requires a gradual process of learning, which in turn requires a system of communication, as imitation alone would not suffice for mastering the fabrication process (see Levinson 2016: 311–314). On the basis of these types of genetic and archeological evidence, Dediu and Levinson (2013: 2) "attribute to Neanderthals modern speech, double-articulation (separated phonology and lexicon), some systematic means of word combination (syntax), a correlated mapping of meaning, and usage principles (pragmatics)." In other words, there is strong evidence that the Neanderthals already had language.

Our biological adaptation for speech – e.g. a lower larynx, an enlarged vertebral canal necessary for voluntary control of breathing – is also present in the fossil record of these two sister lineages, and in our common ancestor, *Homo heidelbergensis*. By contrast, some 1.4 million years ago, *Homo erectus* still lacked these vocal adaptations, which points to a later limit for the emergence of articulate speech. In other words, the archeological evidence is that a vocal apparatus adapted for speech was already present in the species *Homo* about half a million, not 1.4 million years ago.

A question that Dediu and Levinson (2013: 1) ask, and which we would like to repeat here, is: "Why should researchers in the language sciences care what happened in deep prehistory?" Their answer is that gathering evidence from these fields and embedding then in a deeper time scale may change the way one looks at the basis of language, i.e. "as a matter of the rather slow adaptation of multiple factors rather than as a saltational mutation in one or a few genes" (p. 1). As commented on above, *sapiens*, Neanderthals and Denisovans interacted and interbred, thus culturally learning from one another and biologically enriching their adaptive potential for survival in adverse environments.

Our genetic adaptation for language is from the outset a *hybrid* process. Languages are refinements of thousands and thousands of years of a piece-meal process of creolization and contact with other hominids. Languages are thus preceded by processes of collective organization, which yielded our universally *social* character. Gradually, the *homo* species produced a fundamental capacity for cooperation, intention recognition, and interaction (see Tomasello 2008; Levinson 2006; Penz, this volume; Kaal, this volume), which led to the development of language and culture. Without cultures – local forms of social organization with some universal guiding principles like structures of kinship and taboo –, the adaptation of a linguistic apparatus would not have been possible: phylogenetically languages are the byproducts of the interaction between genes and history (Malabou 2016; Dediu 2016). As Dediu and Levinson (2013: 10) unambiguously conclude from their extensive review of the current genetic and archaeologic research on human evolution: "the increasingly complex speech system must have come later, with the more complex aspects of language – phonology, syntax, and lexicon – being the last to evolve." The *homo* species thus *plastically* carved language out of the central existential conditions for human survival, as imposed by interaction and adapted through pragmatics.

This slow adaptation, which has taken over half a million years and is still on its way, is as much biological as it is cultural. A process of "slow accumulation", as Dediu and Levison (2013) propose, has led to genetic processes of bodily adaptation for using language, an apparatus that is primarily interactional and requires years of socialization in infancy to be grammatically, culturally, and pragmatically mastered (Oishi, this volume; Ochs 1988; Duranti 1994; Ochs & Schieffelin 2008; Arnold 2019). Thus, language evolution, a piecemeal process of culture-gene adaptation and selection, strongly relies on pragmatics, i.e. on our inherited adaptation for co-engaging (Levinson 2006), recognizing the directionality of the action of others (Duranti 2015), and orienting ourselves to communicative practices (Hanks 2018). Thus, we will address how the authors in the present volume grapple with these issues of adaptability from a pragmatics-oriented viewpoint, including its social and other aspects.

3. Chapters on the pragmatics of adaptability

The present work is organized in four sections: "Adapting truth, speech acts, and ideologies"; "Adapting texts and textuality"; "Adaptive communities of practice"; and "Adapting learning and teaching." In each section, we grouped the chapters by their affinity, but this neither means that other affinities will not be found across sections, nor that a chapter sticks only to the umbrella terms of its section. For instance, Kaal's analysis of the spatial grounding of discourse about self-driving cars at the same time discusses terms involved in the three first sections, namely ideologies, textuality and (advances in) technology. Overall, we hope to have made the connections between the individual chapters clear.

Section I, "Adapting truth, speech acts, and ideologies", has four chapters that, broadly speaking, correlate adaptability and the conditions and coordinates of speech action. Jacob Mey's chapter, "Adaptability and truth", and Etsuko Oishi's, "How do we adapt ourselves in performing an illocutionary act?", deal more closely with the adaptable feature of speech acts: while Mey elaborates on constatives, or truth-oriented speech acts, Oishi focuses on performatives or felicity-driven speech acts. Along similar lines, Hermine Penz, in "Adapting to changing concepts of time: from life to fiction", and Bertie Kaal, in "The reality of technological worldviews: Time and space frames of reference in the world of self-driving cars", discuss the performativity of language by taking into account how notions of temporality and spatiality have been adaptively produced in different societies; in other words, the book's first section addresses important questions in the contemporary world. Some of these questions may be framed in any of the following ways: In a world where truth has been displaced by such perplexing notions as 'post-truth' or 'alternative facts', how to account for the very adaptability of truth in the logical and scientific tradition? Given the fact that the adaptability of the environment to both human need and greed points to the possibility of destruction of entire ecosystems, how to develop an ethical account of the drive to adapt nature to human interests? How do language users exploit, sometimes in politically deceptive ways, the potential for adaptation in speech acting? What may we learn from fiction and from other cultures about the ways in which time and space frame our action in text and speech?

Chapter 1, authored by Jacob Mey, is concerned with the adaptability of truth. Even though Mey does not directly raise the first question above, about the displacement of truth in the contemporary world, his chapter is dedicated to demonstrate that a critical scholarly tradition on truth – from the medieval philosopher St. Thomas Aquinas, to the Enlightenment thinker Giambattista Vico, and to our present day anthropologist Bruno Latour – has understood facts not as inherently 'true' or 'false', but as 'received', or communicatively adapted as true or false (for Aquinas), as a 'done thing' (for Vico), or as 'authenticated' as true or false by a community of experts or individuals holding authority (for Latour). Mey therefore moves 'truth' away from the register of representation and correspondence, where it has often been treated in the rationalist tradition, and towards the pragmatic world of affairs. In his words: "human knowledge as a *mental* activity is more properly seen as an *adaptation* to reality than as a mere representation." In the face of the current phenomenon of *post-truth*, a new term that the Oxford English Dictionary defines as that which "relat[es] or denot[es] circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief", how could we differentiate the notion of truth as an adaptable phenomenon, maintained by Mey, from the subjective view advocated by those like Donald Trump and his advisers, who offer "alternative facts" to objective phenomena like global warming, or the number of people who attended his inauguration? Obviously, these visions are radically different, and for a number of reasons. The most prominent difference is that Mey's notion of truth adaptation draws from the chain of authentications that is constitutive of science: scientific facts are subjected to the scrutiny of other experts, through peer reviewed texts and other speech genres; the utterances of science also draw on an accumulative tradition of expertise and continuously revised knowledge; usually, these utterances also depend on other actors, like state agencies, regulatory bodies, ethics protocols, labs, and technological devices. The alternative facts produced in the post-truth agenda lack all of these preconditions: no chain of scientists or expert outlets are necessary for the validation of this knowledge; alternative views on climate change or the fires in the Amazonas usually discredit the knowledge accumulated in the scientific tradition, as well as the parameters set by regulatory bodies. In addition to these modes of validation of truth in science, Mey points to the ethical dimension of the adaptability of truth in our living on Earth. His discussion of the "inconvenient truth" of the need of an ecological dimension of truth – which "implies conserving the environment by adapting the human population to it" – ultimately means that an ethical and environmental discussion of truth is an existential necessity, since without the remaining ecosystems "no truths can be sustained".

In **Chapter 2**, Etsuko Oishi draws on the critical pragmatic tradition of which Jacob Mey is one of the main representatives, to discuss how language users adapt to linguistic and societal conventions to communicate with others. After revising John L. Austin's (1962) pioneering work on the societal and individual conditions for the production of speech acts – utterances that produce a series of effects in the world –, Oishi looks at the differences between societies with regard to their conventions for the performance of illocutionary acts, that is, the layer of a speech act that. according to Austin. corresponds to our doing an action in saying something. To account for the adaptability of users in performing illocutionary acts, Oishi looks at the differences between the societal conditions for the uttering of apologies in Japanese and English. The author provides a detailed account of how users of Japanese perform an illocutionary act of apologizing, which, on the one hand, presupposes executing series of moves of expressing regrets for possible offences or discomfort caused by addresser, even if the latter does not commit her/himself to the belief that an offence was made, and mastering a system of honorifics that embed the speech act at stake in conventional hierarchies of social membership. Additionally, Oishi relates the production of effects in the act of apologizing to questions of conversational sequentiality, to the apology's entanglement with other acts such as expositives, and to discourse more broadly. Fundamentally, Oishi's rendition of adaptation in speech acting points to the great plasticity of language that we identified in the previous two sections. In her words: "The linguistic/societal conventions which specify the procedures of performing illocutionary acts do not force language users to adapt to them passively." In other words, even though language users are obliged by societal and linguistic constraints, they also dispose of considerable space for agency in language.

Chapter 3, Hermine Penz' discussion of the variability of conceptions of time in individuals' activities as well as in different societies and technological innovations, explores the fundamental question of temporality in our adaptability as creators, users and transformers of technology. Penz provides an insightful review of theories about time, from Newton's mechanics, to Norbert Elias' sociology of temporality, to Einstein's relativity and to contemporary theories in linguistics and other disciplines, about the entanglements between time and human adaptation. The chapter's first part is theoretical, and offers an exemplary panorama of these accounts of temporality, while the second part engages with fiction writing in order to discuss the relations between time, fashions of speaking, and adaptability. The piece of fiction at stake is Ted Chiang's (2002) short story "The Story of Your Life", which became famous worldwide in its adaptation – no pun intended! – to the screen as "The Arrival", a movie directed by Denis Villeneuve. In the 2016 movie, Amy Adams plays the main character, the linguist Louise Banks; Jeremy Renner plays Ian Donnelly, a physicist in the team with whom Dr. Banks has a child; and Forest Whitaker plays Colonel Weber, a military member of the scientific team formed to study the language of the Heptapods, the creatures who arrive on Earth in different giant flying saucers. Penz discusses how a different conception of time is encoded in the Heptapods' language, which is graphically expressed as rounded, moving characters and semantically as well as grammatically does not differentiate between past, present, and future. In addition to carefully unpacking the intertextual links between the short story and Sapir and Whorf's hypothesis of linguistic relativity and Austin's performative view of language, Penz' chapter unpacks the textuality in the story, which indexes the simultaneity of time in the language of the Heptapods. Herself the hero in the story – after all, she is the one who is ultimately able to learn the language of the extraterrestrial visitors by principledly interacting with them instead of unsuccessfully analyzing their language mathematically, from a distance, as the other male members in the team did –, Banks, the linguist gets influenced by the Heptapods' own fashions of speaking; she experiences as well as narrates the story by uncannily using the tense system of English. In Penz' words: "The story starts in the present tense, resorts to the past tense to narrate the events connected to the encounters with the aliens, and alternates between these two tenses to keep the different narrative levels apart". This chapter thus gauges how fiction may provide a baseline – one that of course should not be confused with the parameters of everyday reality – to entertain the "extreme adaptability of the human mind."

Like Penz, Bertie Kaal, also moving forward, articulates temporality with textuality in **Chapter 4**, "The reality of technological worldviews: Time and space frames of reference in the world of self-driving cars"., Kaal's chapter integrates space and attitude in a conceptual model for analyzing texts using Space, Time, and Attitude (STA) as her frames of reference in the study of texts. Drawing upon other models of articulating time, space and language – such as Bakhtin's (1981) notion of the chronotope and Levinson's (2003) investigation of spatial cognition in language –, Kaal singles out an article published in the *MIT Technology Review* about self-driving cars, and applies her STA model to discuss the basic problem, raised by Mey (2009), namely the alleged necessity of people having to adapt to technologies, and not the other way round. Based on her analysis of how the interactions between time, space, and intentionality articulate in the MIT article's scientific stance, Kaal observes that technological innovation is presented there as a given, unquestionable precondition of our current life in an era of globalization. In addition, the analyzed text does not lend itself to raising fundamental ethical questions, such as: Who is to benefit from self-driving cars? Who is going to pay for their effects on the environment? How will people adapt to this new technology? In concluding, Kaal's chapter proposes a critique of the rhetoric of realism by insisting on the need for a pragmatic stance in reading texts.

Section II, "Adapting text and textuality", is concerned with how language users adapt textual and discursive resources in their everyday actions. Theo van Leeuwen, in **Chapter 5**, "Ad-appting children's stories," opens the section by sharing the observation that the new digital media, rather than merely being a neutral artifact of communication, actually influence, and change, our textual habits and the ways we form our thoughts and express our feelings. As the author says, "The software we use to write, to interact with our friends, to tell stories, to shop, to do our work, has a built in knowledge of *how* we should do all these things – how we should write, how we should interact with our friends, how we should tell stories, how we should shop and how we should do our work" (van Leeuwen, this volume). This observation is then applied to a specific kind of literary practice, namely, the writing of children's books. It stands to reason, then, that we need to analyze the "digital templates" that publishers and authors of children's books use to structure and market their stories.

Discussing one particular children's story, Dr. Seuss' *The Cat in the Hat,* van Leeuwen comments on the different interpretations that this story has been given as appropriate for children, They should not just let themselves be "enchanted" (as Bruno Bettelheim called it) by the narration; they should also, according to Walter Ong, be "instructed" in ways of dealing with the world and its dangers. With regard to the digital realization and framing of the story, the author then asks how the 'app' which provides the children with access to Dr. Seuss's work and tells them how to 'deal with' it, stands in relation to the two ways of viewing its content described above. As van Leeuwen (this volume) says, it is the “tension between enchantment and instruction” that he seeks to disentangle, both in the Seuss book itself and in a digital ‘Young Person’s Guide To Reading’ that somewhat underhandedly (not to say underdigitally) comes with it. Following the app’s handling of the story, the author makes incisive comments both on the actual realization of the ‘apped’ tale and on its wider implications. If the app indeed is conceived of as a ‘reading guide’, this points up an important theoretical problem, in that an app like this “divorces writing and reading”; in the same vein, one could ask how ‘reading’ as a skill is improved by adding pictures.

That said, there are also a number of technical weaknesses in the digital presentation that are discussed at some length in the chapter. Such weaknesses often have to do with the mechanics of the app’s ‘wording’ technology, including ‘tapping’ and ‘pressing’ the pictures (for instance, tapping ‘a little toy man with a rake’ leads to identifying him verbally as a ‘rake’! A more serious question is the one earlier raised by van Leeuwen in this both ‘enchanting and instructive’ chapter: what will the effects be of the “divorcing writing from reading”, as promulgated by the app? After all, isn’t “writing the physical base which is so important in learning to read”?

Next, Daniel Silva and Branca Fabrício, in **Chapter 6**, “Self-containment and contamination: Two competing circuits of adaptability,” single out two models of discourse adaptation in society. Inspired by Anna Tsing’s (2015) work on scales in the biological and social world, by Charles Briggs’ (2007) work on how communicability shapes people’s understanding of the social circulation of texts in society, and by Bruno Latour’s (2005) studies of knowledge objects in different spheres of social value, Silva and Fabrício look at constructions about discourse in Brazil’s preparation for the 2014 World Cup and the 2016 Olympics, and find two different yet interconnected modes of devising imaginations about the performativity of discourse about the mega-events. The first mode, scalability, projects text and talk about events as expanding without modifying their original design features. Official discourses about the Olympic legacy and the alleged benefits of the mega-events for Rio de Janeiro relied on this model of imagining and projecting discourse. Based on Silva’s fieldwork in the ‘favelas’ of Rio de Janeiro, the authors also look at an alternative model of imagining the circulation of text and talk, namely non-scalability (Tsing 2012), which is a characteristic of semiotic projects that are “unable to travel without being contaminated by the engagement or clash with others.” Mariluce Mariá and Kleber de Souza, two activists that Daniel Silva interviewed, ingeniously draw upon some characteristics of nonscalability – namely infectiousness, transformative adaptation of basic design elements, and horizontal accessibility to communicative resources – in order to provide an alternative account of the real estate and political interests informing Brazil’s entanglements with the mega-events. In gauging these two different yet related forms of imagining discourse, Silva and Fabrício attempt to critique the monolithic models of progress associated with the mega-events. Aided by grassroots ideas about what is to live a life in an unequal city, they also are interested in reshuffling the communicative boundaries of hegemonic discourses.

Anita Fetzer, in “Quotation, meta-data and transparency of sources in mediated political discourse” (**Chapter 7**), discusses how language users adapt the words of others (and at times their own words) in their discourse. More specifically, Fetzer studies the functions of quotations and their metadata – i.e., “the contextual and discursive coordinates of the quoted” conversational contribution – in political discourse (Fetzer, this volume). While reviewing a robust literature on the pragmatic activity of quoting the discourse of others, Fetzer spells out the multiple roles of quotations in political and general discourse. From her pragmatic stance on studying language, the author pays special attention to how the felicity conditions and illocutionary force of a quoted utterance are recontextualized by the quoter, i.e. the “the participant who undertakes the communicative act of quoting.” Methodologically, Fetzer bridges fundamental premises of pragmatics, such as rationality, cooperation, and intentionality of communicative action, and of interactional sociolinguistics, such as indexicality of communicative action, conversational inference, language as socially situated form, and linguistic variation. In combining these fundamental premises of both fields, she analyses an extensive corpus of quotations in politically mediated discourse in the United Kingdom. Based on her detailed analysis of different genres of political discourse in the UK – such as political speeches, Prime Minister’s Questions, and political interviews – Fetzer concludes that quotations in these scenarios may serve different functions, like “intensifying the force of a contribution”, “demonstrating the coherence” of a specific cited question (or its non-coherence), “demonstrating political (non) alignment”, and “securing discourse common ground between multi-layered and multifaceted audiences.” Summing up, the author states that quotations represent a central pragmatic activity in political discourse, as they are essential for strengthening the “presentation of political self in the media, in particular with regard to the interactional organization of credibility and ideological coherence.”

Chapter 8, the final one in this section, is “The adaptability of becoming: Karina Buhr’s becoming-junglehood,” written by Dina Maria Martins Ferreira and Jony Kellson de Castro Silva. Ferreira and Silva undertake a post-structuralist critique of a “metaphysics of unity”, i.e. the idea that language and the subject would both be, in their different ways, unitary and transparent. Theoretically, they draw upon authors in critical pragmatics and philosophy in order to spell out their intellectual stance. Empirically, the authors look at the bodily performances and artistic discourse of Karina Buhr, a Brazilian feminist singer who attempts to realize in art the type of deconstruction that Ferreira and Silva undertake in pragmatics. A contemporary artist in Brazil, Buhr is interested in challenging the terms of a male-dominant tradition in the arts and philosophy. In revisiting Walter Benjamin's theory about the reproducibility of art in the age of serial replications, Derrida's iterability of language, and Deleuze and Guattari's displacement of the Cartesian subject, Ferreira and Silva discuss how Karina Buhr's performance, lyrics, and media activity are aimed at unsettling hegemonic notions about art, identity, and the body.

Section 3 focuses on different communities of practice – students at a North American university, communities of travelers, users of a Facebook group about cancer, users of the LINE social network in Thailand – and their adapting of language and interactional resources. The section opens with "Face, conflict, and adaptability in mediated intercultural invitations: Young adults navigate complexities of ethnicity, gender, nationality, and age" (**Chapter 9**), by Branca Telles Ribeiro, Lucy Bunning and Liliana Cabral Bastos. The authors discuss problems connected with communication in multiple types of media from the point of view of adaptability. Four cases of mediated communication between young adults in different countries are discussed; problems of ethnicity, gender, nationality, and age surrounding the pragmatic act of 'inviting' are discussed. An invitation, as the authors remark, clearly represents a 'complex act', as it balances between Goffmanian solidarity and the Austin-Searlean concept of a "directive". In addition, invitations "frequently take the function of an 'opening' in a mediated interaction" in particular the often necessarily asynchronous internet communication. For their study, the authors used data from an Intercultural Communication course at an American university, spanning five years (2010–2015); the participants were asked to reflect on issues of adaptability and potential conflict, in particular with regard to such factors as status, gender, age or ethnicity, as well as sociolinguistic and cultural differences influencing the interactants' 'face'. The responses by the students are analyzed in detail, and a number of conclusions are offered. In particular, the notion of 'chronotope', originally due to Bakhtin and subsequently developed by Blommaert, is invoked to clarify the various tensions and miscommunications that may arise between interactants of different social status, age, gender, and cultural background. An important intermediate conclusion is offered on p. 242: "*mediated interactions make use of indirectness and rely on new discourse strategies for sense-making*" (italics original). The authors' overall impression of face-work and communication on the internet thus is that "we seem to adapt to inherently ambiguous and more layered social situations" – not least taking into account that "the open-ended nature of the chronotope, applied to mediated communication, indicates an intensified (more laminated and therefore more complex) interaction".

Next, Renata Amaral and Maria das Graças Dias Pereira, in "Discussing breast cancer in cyber spaces: A pragmatic study" (**Chapter 10**), draw upon Jacob Mey's scholarship in pragmatics and adaptability, and on studies in the field of narrative studies, emotions, and digital ethnography, in order to provide an account of a community of practice centered on the figure of Vitória, a woman in Brazil who is fighting cancer. Amaral and Pereira discuss different facets of (and constraints upon) the narrative action of Vitória on the Internet: from her narration of the dismay she experienced when learning about the diagnosis, to her decision of fighting the "enemy", and to her media activism in telling other women about resisting and defeating both breast cancer and the related stigma of being a cancer patient in Brazil. The authors delineate an interesting and sophisticated picture of how storytelling is entangled with the production of an "emotional community" in which participants enact feelings of identification, belonging and solidarity (see Hagemann 2015). In addition to showing how this emotional community was central in Vitória's coping with the diagnosis, Amaral and Pereira attempt to gauge agency in discourse: from their account of Vitória's multilayered discourse, the cancer patient goes from victim to activist, from passive to active in dealing with a condition that may affect many women around the world – and also a disease that, when properly diagnosed and treated, has high chances of being healed.

In **Chapter 11**, 'Expressing opinions and emotions while traveling on-line: A corpus-pragmatic approach', Eva M. Mestre and Jesús Romero-Trillo discuss the impact that the new technologies of communication have on our daily life. The particular 'life sphere' they focus on in their contribution is that of "the communication of emotions in contact-free environments", such as the internet; in this sphere, technology, language, context and emotions intermingle in CMC (Computer Mediated Communication). This becomes especially visible in travelers' accounts of their travel experiences, transmitted on line via social media like Facebook and other outlets, such as personal travel blogs and tourism discussion boards, of which the authors have collected a couple of corpora. Specifically, following the model proposed by Gladkova and Romero-Trillo (2014), the chapter deals with the use of positive adjectives with regard to the concept of 'beauty'; with the realization of personal vs. social reference; and with expressing one's positive or negative emotions in relation to travel. The different theoretical traditions, both social-situational and medium-related, in describing CMC in comparison with face-to-face interaction are summarized and illustrated vis-à-vis both written discourse and the various other factors influencing communication, such as the environment, the message format, ways of arguing, and so on. Other CMC environment such as discussion boards and blogs, are presented with detailed comments, i.e. on how they relate (or do not relate) to face-to-face interaction.

Next, the authors discuss the various characteristics of travel discussion fora, realized either as blogs or in the form of discussion boards; here, (lack of) synchronicity is a major factor, as the bloggers or board discussants do not necessarily have to know each other beforehand. Following this, the individual corpora of travel boards and blogs are presented and scrutinized with respect to their use of (positive) adjectives and (self)-reference; some typical extracts are provided.

The chapter concludes with an analysis-cum-discussion of the most frequently occurring 'positive' adjectives and of the participants' greater or lesser need for self-reference. These results invite a more in-depth discussion of the underlying question of 'what makes people blog?' – a general cognitive/interaction conundrum still waiting to be resolved.[1]

In **Chapter 12**, 'How LINE users struggle to come to terms with the adaptability-adaptivity dilemma', Songthama Intachakra addresses a dilemma earlier discussed by Mey (2009 and this volume): Should users adapt to the computer (by 'adaptivity') or should it be the other way 'round, with the users adapting the computer to their image and control ('adaptability')? The author discusses the conundrum by referring to, and analyzing his and others' experiences with a software program called LINE, an application popular among Thai and other South East Asian users for their multimedia activities, mainly instant-messaging and blogging (according to the most recent statistics, in 2014 more than half of the Thai population were 'on-LINE').

In the current context, this makes it difficult to decide in favor of either adaptivity or adaptability: for many Thai users, LINE has become an internalized, unproblematic way of life; by contrast, other users deplore the loss of the old-time virtues of communication and the "disrupting of the traditional model of security, interpersonal relations, and human values". Furthermore, the addition of many special features to the app (like voice mail, 'emoticons' and 'stickers', some with text added in English, Japanese or Thai) has served to promote its adaptability. Another 'virtue' of LINE is that it appeals to the multiple identities that many users tend to adhere to, both privately and in official contexts; or the practicality of the app that allows one to freely skip between bill paying, IM (instant messaging), "making friends (and foes), settling a business deal, voicing their grievances, entertaining themselves"; and so on.

By contrast, on the adaptivity spectrum, a number of adverse effects are also coming to light, many of them uncommon or unknown to earlier users (such as the 'text-neck syndrome'). What seems to bother a lot of users is the way communication is either under-or overdone; as Paul H. Grice has inculcated on many occasions, the Maxim of Quantity works both ways: not only too little, but also too much information may be unhelpful, and cause a communicative breakdown. In particular, one's way of ending a 'conversation' on the internet may cause communication problems: an abrupt ending of a LINE or other mediated communication

1. [Editors' note].

('silence', i.e. no response, 'walking out', i.e. closing the connection, etc.), when compared to 'normal' situations (where physical and contextual indications may preclude or remedy a false impression), will always leave some users baffled as to what 'really' happened. Other, related phenomena due to over-use of the app come to mind, like underperformance at work, social insufficiency in day-to-day interaction, reduced competence in dealing with one's environment, all of which may be listed as cases where the computer 'takes over' the human user, to the latter's discomfit (often unbeknownst to him or her).

Here, one could also mention the unauthorized use of accessible online information and personal experiences (a misuse which of course is not specific to LINE, but certainly is enhanced by its incredible spread and availability across Thai society). More strictly criminal are a number of activities practiced online, targeting many of the most exposed users such as children, minors, or less privileged adults, whose 'coping' techniques have been found lacking. In all these cases, however, as the author points out, the effectivity of official intervention measures has been less than satisfactory.

The chapter ends on an optimistic note: since adaptation is key to human survival, the challenges involved "require input not only from academics and technology developers, but from official authorities, users and laypeople alike"; the 'resilience' that has been noted by the author in the various instances of adaptability leaves room for a continued faith in the human ability to cope with the dilemmas involving these and other innovative techniques.

Section IV consists of chapters dealing more closely with the pragmatics of adaptability and education. In **Chapter 13**, "Apprenticeship in microbiology: Embodied adaptation to experimental and technological aspects of learning", Inger Mey engages with her one-year-long fieldwork in a microbiology lab at a major U.S. university. She provides minute detail of the types of interactions involved in the lab, especially those centered on novices who are learning to become scientists. Their embodied and social practice is adaptive practice par excellence: an apprentice is initiated in a participation framework that involves a cluster of social rules, discourse genres, and bodily techniques that take months, perhaps years, to be mastered. Drawing upon the work of ethnomethodologists/conversation analysts such as the late Charles Goodwin, and on that of anthropologists of science such as Bruno Latour, Inger Mey looks at the daily interactions in the lab and outside, as they entail a complex dynamic of distributed activities, interactions with humans and nonhuman agents, and the learning of how to use the body and handle sophisticated tools. Her conclusion is that, for a novice, learning to be a scientist means adapting one's body, mind, and language to a new scenario. The affordances provided by nonhuman actors – such as the instruments, bacteria, and other lab objects and by the working environment in general – are not mere 'technical accessories';

together with the interactions with other humans and one's own body, these affordances represent an intricate and sophisticated framework of collaborations that constitute the core of scientific practice.

Next, in **Chapter 14**, "Technological context: A new pragmatic product created by mobile devices", Hussain Al Sharoufi engages with his university students' everyday use of digital phones to discuss the impact of these technologies on Kuwaiti youths' communicative practices. Al Sharoufi draws upon Jacob Mey's theorization about pragmemes – speech acts in context – and upon cultural understandings of pragmatics to compose his research design and the study's questions. His questions are: "Do university students spend considerable time using their mobile devices? Do university students feel differently when using mobile chats or WhatsApp chats? When using WhatsApp, are students engaged in a new context?" Al Sharoufi then refers to a survey conducted with 155 university students in order to understand the regulatory parameters of the new digital contexts in which the students engage, and their uptake of the novelty of these contexts; the author also produces qualitative, textual analysis of his students' interactions on WhatsApp. Al Sharoufi concludes that contemporary technological contexts project different regulatory parameters vis-à-vis face-to-face communication. These emerging contexts of communication, he argues, necessitate "new methods, tools, and insights."

Chapter 15, "Language policy and language teaching: Conditions of adaptability," by Silvana Aparecida C. Prado and Djane Antonucci Correa, presents an ethnographic study of a teachers' training program in the State of Paraná, Brazil. Prado and Correa study the intertwinements between *in vitro* and *in vivo* language policies (Calvet 2007) in their experience with high school teachers of English as a Foreign Language in Brazil. As the authors comment, *in vitro* policies for Louis-Jean Calvet had to do with those top-down linguistic programs as were generally proposed by institutions of power in society; *in vivo* policies, by contrast, represent the responses to those policies coming from those affected by them. Adopting a pragmatic stance, Prado and Correa analyze the teachers' rejoinders and comments, and study how they display different degrees of alignment with the official policies, along with comprehension and acceptance of them. The authors' routine interactions with the teachers were also an important site of dialogue on the road towards the production of an emancipatory education, oriented to fostering language awareness and an openness to diversity in language use. As they conclude, "critical thinking should be encouraged at all levels of education, since this is the way adaptation can be exercised through conscious participation, understanding the seriousness of one's role in a given community".

Now, at the end of our introduction, we want, without further preliminaries, to invite our readers to do their own appraisal of the chapters on the pragmatics of adaptability that lie ahead. It is our hope that the multifarious approaches gathered in this collective volume will stimulate the readership to critically respond to these fifteen pieces of scholarship, as well as engage the readers in a stimulating discussion with the authors from the diverse angles under which the various issues are viewed.

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SECTION I

Adapting truth, speech acts, and ideologies

CHAPTER 1

Adaptability and truth

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Factual statements are supposed to be necessarily ‘true’, as opposed to people’s opinions. But what is often not taken into account is the *fact* that statements always are by a speaker whose relationship to the truth, or command of the facts may be less evident. In particular, leaning on an understanding of ‘facts’ (in science and elsewhere) that is more attuned to the pragmatics of Gibsonian ‘affordances’ and context, the chapter argues for a renewed attention to the conditions of ‘stating’ that circumscribe the truth value of statements. Invoking such diverse authorities as Giambattista Vico, Pope Francis, and Bruno Latour, it is claimed that all speaking is an activity of ‘acting in the world’ around us, rather than merely ‘representing’ that world. This has consequences for the precept of ‘letting the facts speak for themselves’ – as it is affirmed in a deceptively simple, but essentially vacuous popular slogan.

Keywords: adaptability, truth, pragmatics, facts, affordance

> Science consists of facts and theories. Facts are supposed to be true or false. Theories have an entirely different status.
> Freeman Dyson, *New York Review of Books*, March 6, 2014

1. Introduction: Adaptability and scientific truth

On the face of it, truth and adaptability seem two incompatible notions: a factual statement can either be true or false, it’s not open to ‘adaptation’. (In classical logic, there is no middle way for truth; but there are multi-valued logics that allow for other values: probability, feasibility, obligation, desirability, and so on). The late Freeman Dyson, a famous US physicist and recipient of the highest scientific honors, talked about science as consisting of ‘facts’; such facts are “supposed to be true or false”. I want to hedge this by saying that it is our *statements* about facts, the ‘factual statements’, that are ‘supposed to be true or false’. The ‘facts as such’ are

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neither true nor false until somebody pronounces them to be either true or false: as Bruno Latour has pointed out, "a statement only becomes transformed into a fact … when it becomes incorporated into a large body of knowledge drawn upon by others" (Latour & Woolgar 1986: 105–106).

In other words, notions such as 'true' or 'false' are about what *we* make of a fact, not about the 'facts as such'; we utter a 'verdict' (from Latin *veridictum*) after having examined the available evidence, and then render what basically is our 'truth value'. While 'verdict' is from the Latin *veridictum*, and *verum dicere* means 'saying the truth'; the big question, of course, remains: 'Who is doing this 'truth-saying'?

1.1 'Let the facts speak'

A familiar slogan, often heard in humanistic discourse, such as Conversation Analysis (CA) parlance, is 'Let the facts speak for themselves'. Undoubtedly, the use of this locution has been influenced by many occurrences of 'speaking facts' in the scientific literature, the stringency of which humanists have always tried to emulate. But consider now the following sentence: "Pasteur steps back from his yeast cells *to let them speak for themselves*" (Latour 1999: 93). Eliminating the human 'factor' by removing the scientist, Louis Pasteur, from the equation supposedly documents the appearance of a 'scientific fact', one that is relayed to us by the yeast cells, who apparently are able to translate the 'facts' into intelligible discourse, to 'let the facts speak'.[1] Clearly, any such assertion, even if taken only metaphorically, makes no sense and should not be expected to be considered as a serious claim by the scientific community.

Similarly, those asking prospective witnesses in a US courtroom to speak, under oath, "the truth, the whole truth, and nothing but the truth", should be aware that any truth is a truth delivered to us by a human 'factor' speaking the truth, and that in the process, the truth is *adapted* to the understanding of the interlocutors, both speakers, hearers, and bystanders. Any 'truth' has to be processed by the interactants, the *adapting* participants/observers. And here, the old adage holds: '*quidquid recipitur, ad modum recipientis recipitur* ("whatever is received, is received according to the ability of the recipient"; St. Thomas Aquinas). But equally 'truthfully', the truths emanating from the human 'factor', the utterer, are produced in accordance with his or her capacities, hence likewise *adapted*.

1. But note that when above, I mentioned the 'human factor', I surreptitiously and somewhat unwittingly introduced the true origin of the 'fact': the 'fact maker', or human 'factor', as Giambattista Vico might have called him. (On Vico, see further below).

1.2 A papal pragmatics

Interlocutor *adaptability* takes into account the circumstances under which our statements are, or can be, uttered; those circumstances of the factual world (aka. the context) include our factual experience, as it is embodied in our adaptation to all of the interactants, the 'recipients' in the widest sense of the term. All statements, even so-called 'factual' ones (cf. Dyson, quoted earlier), are uttered in this adapted context: they are words, 'wording a world' (Mey 1985) which is forever changing. Even our factually true statements are never 'the last word', as the history of science has amply demonstrated (see Latour 1999: Chapter 4 on Pasteur's discovery of the lactic acid bacillus and his controversy with the famous German scientist Justus Liebig).

So it should perhaps not surprise us, when the one person in the entire world who has an historic claim to be truthful whenever he speaks '*ex cathedra*', the Roman Pontiff, remarks, in a letter to an Italian journalist, the nonagerian non-believer Eugenio Scalfari, founding editor of the respected leftist daily *La Repubblica*,

> I will not speak about absolute truths; even for believers … Truth is a relationship. As such each of us receives the truth and expresses it from within, that is to say, according to one's own circumstances, culture, and situation in life.
> (Letter of Pope Francis, 11 September 2013. Quoted in Jim Carroll, "Who am I to judge?" A radical Pope's first year'; *The New Yorker*, Dec. 23 & 30, 2013, p. 83)

The stance taken by Pope Francis here is radically *pragmatic*. It rests on the belief that all of our acting and speaking is *situationally conditioned*, which implies that we can only act to the degree, and in the ways, that the situation and our abilities afford us. But these 'affordances', as the US psychologist James J. Gibson (1979) used to call them, are not only dictating our limitations; they are what makes our 'reception' of the 'facts' possible and frees up our speaking about them.

Gibson's affordances both limit and open our potential for acting and speaking. To avail ourselves of that potential, we have to *adapt* to the situation and *adopt* its 'truth conditions', that is to say, the conditions that allow us (or disallow us, as the case may be) to be 'truthful' in the sense of Pope Francis, rather than obeying the abstract truth conditions of the logicians and formal linguists.

1.3 Cognitive aspects and Piaget's work

In this context, it also behooves us to recall Jean Piaget's (1896–1980) stance that all cognitive activity is 'adaptive': that is to say, we adapt ourselves to the world cognitively, and we cognitively adapt the world to us. Truth is always somebody's truth: adapted to, conditioned by, the capacities and limitations of the individual (or even the society of which the person is a part).

Through adaptation, the developing child internalizes representations, for instance of *objects* in the environment such as dogs and cats (*assimilation*). Then, s/he notices that both dogs and cats are not static objects, but move around freely; a category 'animal' is created (*accommodation*). Dogs and cats are not like parents or other people who are 'accommodated' as human; still, they are seen as having a special relation to humans: a sub-category 'pet' arises in the adaptive mind. Yet, not all animals are pets: a *differentiation* occurs, at which point the category's truth values are adjusted and extended by the child individually. For example, an iguana can be a pet for a child with cat allergies, but not any reptile (think Komodo dragon). A dinosaur can only be a pet in an animated movie, or as a toy miniature. And so on (see Atherton, 2013).

2. Truth and activity: Vico's take

More generally, one could observe, with the Neapolitan philosopher Giambattista Vico (1668–1744), that truth is a dynamic concept: "*verum est factum*", the true is the 'done thing', a 'fact'.

In Vico's philosophy, only God can create facts; God is the 'Artifex of Nature', as opposed to Man, who is the 'god of artifacts' (*Deus naturae artifex, homo artificiorum deus* (Vico 1711: 110; § III, *De Ingenio*).

For Vico, 'truth' belongs to God: *genitum non factum,* as the Roman Credo has it about the Son who is named *Verbum*, the Word. But truth also belongs to humans, as both hearers and speakers, 'eructators', of the word (St. Augustine was called *eructator divinorum elogiorum*, somebody who 'belched out' the sacred words). This 'word' is *factum, non genitum*: it embodies the 'fact' and human act of speaking: a space/time bound affair, not a divine, timeless and abstract, 'given' – in modern parlance, a pragmatic act, not just a speech act.

In general, our representation of reality is an activity, not a product: Kant's notion of *Vorstellung* denotes the act of (re-)presenting, literally 'placing' (German *stellen*, 'to place') something 'before' (German *vor*) our inner vision, the mind. Hence, human knowledge as a *mental* activity is more properly seen as an *adaptation* to reality than as mere representation.

This adaptation is a process that evolves in space and time, in a localized *situation* and a temporal *sequence*. Hence, what Yueguo Gu (2010) has named 'land-borne situational utterances' and what I have elsewhere called 'sequentiality' (Mey 2013) are integrated elements or aspects of our mental adaptability. We give these adaptive functions names: such names do not denote mere concepts, but denote human activities, like those involved in our use of speech in context (nowadays often called 'languaging'). Naming is key to identifying our activities: Shakespeare's famous query "What's in a name?" (*Romeo and Juliet*, Act 2, Scene 2) therefore embodies a serious, 'realistic' query about the truth of our speaking.

Adaptability changes the very concept of knowledge acquisition, and of truth as an essential element of knowledge. As the late Ernst von Glasersfeld has remarked, "cognition is an adaptive function" (2007: 4). Rather than claiming knowledge to be an *absolute* correspondence between cognition and facts, an adaptive co-construction of knowledge is based on the *dialectic* correspondence of mind to world and of world to mind. When verifying this correspondence (literally 'making it true', cf. the German *Wahrmachen*), we establish a *cognitive* relation of adaptation, rather than relying exclusively on the physicalist model of hypothesis-testing by experiment. In this sense, "cognitive verification is alone constitutive of truth" (Piaget 1971: 232; cited in Glasersfeld 2007: 5). In contrast to true knowledge, then, what is called 'false knowledge' rests on an incorrect, mistaken adaptation.

I conclude that 'truth functions' are existential, not just essential. They allow, as is the case for truth itself, adaptation to the human context and the resulting gradation: truth is an adaptable relationship, as Pope Francis expressed it.

The following sections will illustrate the notion of adaptability by examining a parable from the animal world.

3. Adapting in context

The physicist Brian Greene (2013) has described how one can conceptualize 'fish cognition'. Fish don't 'understand' their environment, the ocean; they just 'do' it. 'Fishy' statements about the ocean are alone verifiable in the fish context, the ocean, hence they are 'true' for the fish. By contrast, outside their context, no verification is possible; hence such statements have no truth value in the scientific sense.

To make his point clearer, Greene refers to a parable, told by physicists about fish investigating the laws of physics. The fish, being habituated to their watery world, fail to take the role of their environment into account when they form their 'physhicalist' [sic] hypotheses. In other words, the fish don't realize how much they have adapted to the influence of the ocean in their thinking. Thus, Greene says, "they struggle mightily to explain the gentle swaying of plants as well as their own locomotion".

3.1 'Fishy' laws

The laws that the fish ultimately find are unwieldy and very complex. Compare that (as I was once told over drinks by a prominent Danish meteorologist), even modeling a seemingly simple natural phenomenon, such as an ocean wave breaking on the shores of the Atlantic, would require more computing power than we have available in our entire world, if every single portion of the breaking process had to be explained using the laws of physics, with their associated mathematical models and computerized equations.

But wait, says Greene, one brilliant fish now has a breakthrough: the explanation is right under our very gills: it's the environment! What if the complexity of the phenomenon just is a reflection of some simple fundamental laws acting themselves out in the complex environment of the ocean? What the clever fish came up as a hypothesis is that the ocean is filled with a viscous, incompressible, pervasive fluid (which we humans know as *water*, but which the fish never had considered as an object worthy of lofty speculation).

At first, the insightful fish was ignored, even ridiculed. But slowly, the other fish, too, realize that their environment, its familiarity notwithstanding, has a significant impact on everything they observe (even if they may not be familiar with its chemical composition, H_2O).

The question that Greene raises is whether the parable of the fish might apply to our own thinking and modeling of our environment. So, "[the parable] may cut closer to home than we suspect? And if yes, are there perhaps other, subtle, yet universally pervasive features of our environment that we haven't folded into our understanding?" (Greene 2013).

The 2013 discovery of the Higgs Boson particle by the Large Hadron Collider in Geneva has convinced physicists like Greene that the answer is a resounding 'Yes'. As Shakespeare already foresaw, there is more between heaven and earth than is thought of in our (natural) philosophy, a.k.a. classical physics. The Higgs particle is merely the tip of an iceberg of (invisible, even dark) matter: quarks, antiquarks, and even pentaquarks: the end is not in sight.

3.2 The limits of truth

The fish parable embodies a parallel: it illustrates the limits on knowing that are imposed by the environment. Fish or human, we all live in a complex context; but (with the parable's one hypothetical 'exception') the fish are not aware of it (yet), while we humans are, or ought to be. The fact is that we are bound in and by our environment, just like the fish are bound by their oceanic horizons.

As to the nature of those bonds, in addition to the universal conditions of space and time, we are in the common frail human condition called the environment, as well as in the individual human situation, determined by our physical condition, our age, our class, our individual and collective resources, and so on. All of these conditions affect our knowing, and in many cases effectively limit or obstruct our knowledge, both in the sense of 'knowing ourselves' and in that of the experts and authorities' 'knowing about' our situation and conditions. In the following, I will discuss some cases.

3.3 Time and space

As human individuals, our life span is limited (even though the Biblical 'three score ten' tend to be outrun by history, at least in major portions of the Western world). In addition, our collective existence on the planet is likewise limited, considering that the end of the entire solar system is a mere 8 billion years away!

So how can a human, living here and now, on Planet Earth, obtain true knowledge of any such truly 'remote' events? Is any information-gathering with respect to such events (e.g. by space probes or other spacecraft) at all possible to envision? And does it even make sense to try? Our world may not even exist by the time such 'true' information feeds back to us.

More or less the same can be said about our relationship to space (after all, ever since Einstein and Hawking we know that space and time are not distinct dimensions). Thus, any statements about the far reaches of the galaxy (not to say: the universe) cannot be tested against experiential facts, simply because we cannot go there except in 'true flights of fantasy'. Whereas (as we saw in the beginning), factual statements must be based on experience and tests, nothing of the kind is available, once we are far enough outside our solar system, not to say our galaxy. In other words, we must resign ourselves to the fact that *factually* true statements and accurate measurements are only possible within our environment. They have truth values only relative to our own world (and even there, are subject to constant revision and recalibration).

3.4 The case of Alzheimer's Disease

A further example of human boundaries on knowing-by-experiment is provided by current research on Alzheimer's Disease (AD). The question what really is going on in a human brain affected by AD has puzzled scientists and medical experts for decades. If AD is a mere physical condition in the brain, how to explain the amazing variety of ways the disease affects people? In particular, one would like to know how the different manifestations of AD, and its varying nosology across gender, age, race, social class, patient history and so on, have their physical 'match' in the human brain. But in the case of AD and similar diseases, we have only limited experimental access to facts: there are only certain tests and experiments we can perform on a living brain, given the requirements of ethical conduct in science. In particular, testing for permanent brain changes can only done by obduction, that is *post mortem*, when crucial evidence literally has been taken into the grave. In other words, the availability of 'factually true' statements, based on live experiments, is limited, since the necessary tests are not *humanly* feasible or permissible.

4. Adaptability and truth

Let's now go back to the original themes of this chapter: truth and adaptation, and connect it with the insights obtained about our environment, based on the parable of the 'clever fish'.

Human adaptation *vis-à-vis* the environment has what I would like to call the face of a 'Janus', the old Roman god guarding gateways and doorways, his two heads looking both in and out, back and forth. The one face of our environmental Janus, looking right, sees many humans busying themselves with adapting the environment to their needs ('conquering Nature', as it was called in earlier times). The other face, looking left, observe how other humans try to adapt themselves to the environment ('living in harmony with Nature', as it is often, a bit naively, formulated).

Truth and truthfulness appear to be conditions *sine qua non* for both 'looks' of this Janus; we are dealing with "inconvenient", yet unavoidable "truths" (Al Gore 2006). But what about adaptability, and the limits set by our human reality?

Having narrowed down our original, broad inquiry about truth and adaptability, we can ask the more appropriate question:

Where do truth and adaptability stand in regard of the environment?

Are truth and adaptability just abstract notions, of interest only to politicians and philosophers, of importance in the business of winning arguments or elections, or are they relevant also in environmental debates?

Alternatively, is adaptability a mere matter of funding clever engineering, and should we leave issues of adaptation to the business leaders and the fund administrators, to the technocrats and the engineers?

5. Truth and ecology: Will the twain ever meet?

To answer the question, we need to realize that truth, being a *relationship* (as Pope Francis reminded us), is not a univocal concept. Just like there are different types of truth values (besides the purely logical ones of the 'truth tables'), there are various truths involved in the current debates (and some of them are truly inconvenient). One person's inconvenient 'truth' may be another person's flagrant 'hoax', as the recent internal US debates on 'global warming' have shown. In a global perspective, the battle is between the two faces of our Janus, guarding the gateways to a sustainable future for the world.

This environmental Janus's struggling faces, and the truths they embody, belong respectively to the technologists versus the ecologists.

Technological truth is understood as: Exploiting our natural resources, as needed to feed the world's population and maintain our standards of living. It is about adapting the environment to humans. By contrast, *ecological* truth is about maintaining natural resources as a condition on survival of our species. It implies conserving the environment by adapting the human population to it.

If these two truths continue to be defended, however 'inconvenient', by the one part, and considered a 'hoax', or even a 'glaring lie', by the other, we are in for a 'true' mess. In reality, however, while both truths are *essential* to our survival, we must balance them *existentially* by keeping our eyes on our common environment, without which no truths can be sustained.

When asking the important question: Where lies the truth of the matter?, we must remind ourselves that here, as everywhere, the proof of the pudding is in the eating. In other words, the truth is not an abstract one, but one that makes sense for consumption in our world: a truth that is not merely inconvenient, but one that is ecologically sustainable, as it embodies the true relationship between humans and their environment.

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CHAPTER 2

How do we adapt ourselves in performing an illocutionary act?

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The present chapter examines the idea that language users adapt to linguistic/societal conventions to communicate with each other by describing the mechanism in which they perform an illocutionary act and engage in a communicative exchange. Austin's ([1962]1975) felicity conditions are scrutinized to show how a speaker executes her/his own illocutionary act by utilizing and adapting to linguistic/societal conventions that specify illocutionary acts, their effects, the addressers, the addressees, and the contexts. There are linguistic/societal conventions which allow/force a speaker to specify the social relationship between the speaker and the hearer, and/or (in)formality of the speech situation. This is illustrated by examining the act of apologizing in Japanese, in which honorific marking is grammaticalized. There are also linguistic/societal conventions which specify illocutionary effects in discourse, which are analyzed as effects of expositive-type illocutionary acts (Austin ([1962]1975).

Keywords: adaptation, illocutionary acts, expositives, J. L. Austin, discourse

1. Introduction

Mey (2009: 8) points out the potential danger of human's adaptation to tools such as computers:

> It has been well known, ever since the pioneering work of people like Carroll (1991), that the tool we use to perform a particular task not only assists us in doing what we have to do, but also changes our understanding of the task itself and of a host of other things related to that task.

Mey (2009: 9) distinguishes between primary and secondary effects of adapting:

> To take a well-known example, when Henry Ford Sr. wanted to put an automobile in everybody's front yard, the primary effect of this 'automotive revolution' was that people were able to travel farther and in ways not imagined before. But the

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> secondary effect, not foreseen by Ford or anybody else at the time, included our adaptation to this new transportation device; our mind-set changed, the automobile becoming our premier status symbol, […]. In due course, these secondary effects (including the need to build more and more highways, in the process destroying entire rural and urban environments […]) were much more important than the simple primary effects in regard to our modes of transportation.

Similarly, computers have changed our experience of writing. Says Mey:

> Paper has always been said to be 'patient' in that it did not protest against whatever the author put down on it […]. In comparison, the patience that the computer exhibits is not just an inherent quality of the tool: it is transferred to, and located within, the computer 'literate', who knows that Pilate's age-old adage *Quod scripsi, scripsi*, "What I have written, I have written" (John 19: 22) has been rendered null and void by this new medium. Here, it doesn't matter what is written, for everything can always be reformulated, corrected, transformed, and recycled at the touch of keystroke or using a few specialized commands. (Mey 2009: 11)

If adaptation changes the experience of the person who has adapted, does learning a *language*, that is, adapting to the use of the language, change the experience of the speaker who has learnt/adapted to it? The answer seems to be affirmative. Although we cannot unlearn our mother tongue to prove this, we can assimilate the process of learning our second language to that of learning our mother tongue. As Mey (2001: 118) observes, a speaker's experience of communicating undergoes changes when a second language is acquired:

> Compare also the naïve enthusiasm that many first-time second-language (L2) learners display for the 'richness' of the (however partially acquired) new language acquaintance, as compared to L1, the 'poor relative' in the old country. One frequently hears such learners, after they have become relatively competent in the foreign idiom, say something like; 'Now that I've learned this second language, I just can't say anything in my own language any more without feeling totally inept.' (Mey 2001: 118)

Here, the question is: Do linguistic theories explain adaptation? Do they describe how a speaker experiences 'change' through acquiring a language and adapting to its use?

The purpose of the present chapter is to give a speech-act-theoretical explanation for people's adaptation and adaptability to language. To explain adaptation, a person who adapts should be clearly separated from something to which s/he adapts. Austin's ([1962]1975) speech act theory provides a promising model: a speaker adapts her/himself to be the performer of an illocutionary act to bring about a conventional effect. Austin's felicity conditions ([1962]1975: 14–15) clarify the distinction between a performer who brings about a conventional illocutionary effect and a speaker in a given case (in the present chapter, the former is referred to as an *addresser*).[1] The following section explicates how a speaker becomes the addresser of a particular illocutionary act and brings about a conventional effect, while specifying the hearer and the circumstances of the speech situation as the addressee and the context of the illocutionary act. Section 3 discusses the act of apologizing in Japanese to illustrate illocutionary effects brought about on the social relationship between a speaker and a hearer, and/or (in)formality of a speech situation. Section 4 will show that there are societal/linguistic conventions which bring effects in discourse by analyzing the expositive illocutionary act type (Austin [1962]1975: 161–63).

2. The speaker/the addresser, the hearer/the addressee and the circumstances of the speech situation/the context

Analogous to what Mey (2009) claims about our adaptation to tools like computers, language users adapt to the use of words with which they do things (Austin [1962]1975): words they use to perform a particular illocutionary act not only assist them in doing it, but also change their experience of performing the act. This is stipulated in Austin's ([1962]1975: 14–15) felicity conditions (A.1) and (A.2):

(A.1) There must exist an accepted conventional procedure having a certain conventional effect, that procedure to include the uttering of certain words by certain persons in certain circumstances, and further,
(A.2) the particular persons and circumstances in a given case must be appropriate for the invocation of the particular procedure invoked.

Of importance here is that 'certain persons in certain circumstances' in (A.1) are distinguished from 'the particular persons and circumstances in a given case' in (A.2). In the present chapter certain persons and circumstances specified by the conventionally accepted procedure (in (A.1)) are referred to as 'the addresser', 'the addressee' and 'the context', while the particular persons and circumstances in a given case (in (A.2)) are referred to as 'the speaker', 'the hearer' and 'the circumstances of the speech situation'.[2] A conventional illocutionary effect is produced when the speaker, the hearer and the circumstances of the speech situation are the addresser, the addressee and the context of the illocutionary act, respectively.

1. Cf. Oishi (2011, 2014, 2015) and Oishi and Fetzer (2016).

2. Oishi (2011, 2014, 2015) and Oishi and Fetzer (2016).

The former part of felicity condition (A.1) "There must exist an accepted conventional procedure having a certain conventional effect, that procedure to include the uttering of certain words" specifies that illocutionary acts are differentiated by linguistic/societal conventions: illocutionary acts carried out by uttering certain words bring about conventional effects. For example, the illocutionary act of apologizing, which brings about the illocutionary effect of expressing regrets for one's past offence, is carried out by the utterance of 'I am sorry', 'I apologize', or the like in the English-speaking society.

A rough idea about how illocutionary acts are differentiated by linguistic/societal conventions of a given language/society may be acquired by examining a language's performative verbs and their use.[3] This method is proposed by Austin, the founder of Ordinary Language Philosophy, and it reveals his faith in language use as being:

> … our common stock of words embodies all the distinctions men [sic] have found worth drawing, and the connexions they have found worth marking, in the lifetimes of many generations: these surely are likely to be more numerous, more sound, since they have stood up to the long test of the survival of the fittest, and more subtle, at least in all ordinary and reasonably practical matters, than any that you or I are likely to think up in our arm-chairs of an afternoon – the most favoured alternative method. (Austin [1961]1979: 182)

The latter part of felicity condition (A.1), "that procedure to include the uttering of certain words by certain persons in certain circumstances", specifies that certain persons and certain circumstances are societally specified (i.e. as the addresser of an illocutionary act, the addressee to whom the illocutionary act is performed, and the context of performing the illocutionary act). For example, the addresser of the illocutionary act of apologizing is the person who made an offence and feels sorry for it, the addressee is the person against whom the offence was made, and the context is the situation in which the offence was made, whereas remedial measures for it have not been taken.[4]

Felicity condition (A.2) specifies a speaker and a hearer and the circumstances of a speech situation. An illocutionary act is felicitously performed only when a speaker, a hearer and the circumstances of a speech situation are appropriate to

3. There are, however, societally accepted illocutionary acts which do not have a performative verb. For example, there is no performative verb 'verdict' in English; you have to use a verb phrase such as 'render a verdict' (Mey 2001: 107 and this volume). There are also cases in which different performative verbs do not correspond to illocutionary acts which are differentiated societally (at least presently).

4. Cf. Goffman (1971).

constitute the addresser, the addressee, and the context of the illocutionary act, respectively. For example, one owes an apology to another when the former has committed an offence against the latter, and has not taken any remedial measures for the offence.

However, relevant linguistic/societal conventions, and an appropriate speaker, an appropriate hearer, and appropriate circumstances of a speech situation are only the necessary condition, not the sufficient condition, for an illocutionary act to take effect. They in themselves do not initiate or complete the performing the illocutionary act.

Austin (1975: 15) hypothesizes, as the driving force of performing an illocutionary act, the 'execution' of the conventional procedure by an appropriate speaker and an appropriate hearer in appropriate circumstances.

(B.1) The procedure must be executed by all participants both correctly and
(B.2) completely.

Felicity condition (B.1) describes participants' correct execution of the procedure, which is typically manifested by the speaker's utterance as the addresser of the illocutionary act, which invites the hearer to be the addressee of the illocutionary act. Felicity condition (B.2) describes the participants' completion of the procedure, which is typically manifested by the hearer's acknowledgement of the illocutionary effect and her/his accepting to be the addressee of the illocutionary act. For example, when a speaker says 'I'm sorry' as the addresser of the illocutionary act of apologizing, s/he executes the procedure of the illocutionary act of apologizing, whose conventional effect is to express regrets for her/his past offence to the hearer. The correctly executed procedure of performing the illocutionary act of apologizing is completed when the hearer acknowledges the illocutionary effect, and accepts the status of addressee of the act of apologizing.

Furthermore, Austin ([1962]1975: 15) specifies another aspect of performing the illocutionary act as follows:

(Γ.1) Where, as often, the procedure is designed for use by persons having certain thoughts or feelings, or for the inauguration of certain consequential conduct on the part of any participant, then a person participating in and so invoking the procedure must in fact have those thoughts or feelings, and the participants must intend so to conduct themselves, and further
(Γ.2) must actually so conduct themselves subsequently.

These conditions illustrate that for a speaker to execute the procedure of performing an illocutionary act is (i) to make her/his thoughts or feelings, or her/his intention to inaugurate a certain consequential conduct consistent with the thoughts/feelings and intention of the addresser of the illocutionary act, and (ii) to identify her/his subsequent conduct with that of the addresser. Similarly, for a hearer to complete the procedure of performing an illocutionary act is (i) to identify her/his thoughts or feelings, or her/his intention to inaugurate certain consequential conduct in accordance with those/that of the addressee, and (ii) to identify her/his subsequent conduct with that of the addressee. For example, for a speaker to execute the procedure of performing the illocutionary act of apologizing is to express (i) the thought that her/his past conduct was an offence against the hearer and (ii) a regretful feeling toward it. Furthermore, it is for the speaker to conduct her/himself so as to avoid committing a similar offence.

Since numerous illocutionary acts are differentiated by the linguistic/societal conventions of a given language/society,[5] addressers, addressees and contexts of illocutionary acts are repeatedly manifested as agents and contexts of communicative exchanges in a given society. The procedures for various types of communicative exchange are available to language users, and they go through a particular experience each time, while actively adapting themselves to the linguistic/societal conventions of illocutionary acts and engaging in communicative activities of common types.

However, language users who execute or complete the procedure of performing an illocutionary act do not go through the linguistic/societal conventions passively. The linguistic/societal conventions of illocutionary acts reveal subtly different addressers, addressees, and contexts: every speaker, hearer, and speech situation are different from every other speaker, hearer, and speech situation. Therefore, the speaker chooses to execute the procedure of performing a particular illocutionary act, among the numerous others, and becomes a particular addresser by judging who s/he and the hearer are, and what circumstances characterize the speech situation. The speaker does so because s/he wants to engage in a particular type of communicative exchange with the hearer, and intends to bring about the particular illocutionary effect. Similarly, the hearer chooses to complete the procedure and become its particular addressee not only on account of who/what s/he and the speaker are, and what circumstances make up the speech situation, but also because s/he wants to engage in the particular type of communicative exchange with the speaker, in order to cooperatively bring about the particular illocutionary effect.

5. Austin ([1962]1975: 150f) says the number of speech act verbs "goes from 1,000 to 9,000 – a good margin".

3. Different linguistic/societal conventions of performing illocutionary acts

When you learn a new language, you adapt yourself to new societal/linguistic conventions. By means of the new conventions you learn, you perform new illocutionary acts, and also illocutionary acts which are equivalent to, but not exactly the same as, those performed in your own language/society.

When you learn Japanese, you learn and adapt to the Japanese linguistic/societal conventions. When you perform the illocutionary act of apologizing in Japanese, for example, you adapt yourself to the Japanese linguistic/societal conventions which differentiate it from other related illocutionary acts, and specify the effect, the addresser, the addressee and the context of the illocutionary act. You learn that the utterance '*sumimasen*', which is functionally equivalent to uttering 'I am sorry', is used not only to apologize but also to express gratitude (where an English speaker would say, e.g., 'Thanks a lot'). When the verb '*sumu*' ('to become clear') is negated with the negative particle '*nai*' to describe the mental state of the addresser, it means the addresser is anxious.[6] When it is the addresser's conduct that s/he is anxious about, the utterance is equivalent to the act of apologizing. When it is about the addressee's self-sacrificing conduct, on the other hand, the utterance is an act of expressing gratitude.[7]

Because of the difference between the English linguistic/societal conventions and their Japanese equivalents, a native speaker of English in this case would find performing this illocutionary act of apologizing in Japanese as equivalent, but slightly different, from the English act. The addresser of the act is societally specified by the Japanese conventions as the person who feels anxious about, or feels sorry for, her/his conduct, which is not limited to the particular offence as such; the conduct that caused inconvenience or discomfort is likewise the subject of the act of apologizing. Accordingly, the addressee is not only the person against whom the offence was made, but also the one(s) whom the inconvenience

6. The *Iwanami Kogo Jiten* ('Iwanami Dictionary of Old Japanese') cites an 11th century use of '*sumi*' to describe a state of mind without disturbing thoughts: in other words, a calm mind.

7. To express gratitude, the speaker has the choice between uttering '*sumimasen*' and '*arigatoo(gozaimasu)*'; the latter is equivalent to a (very polite) 'Thank you' in English, and, by uttering it, the speaker more straightforwardly performs the act of expressing gratitude. The difference is in whether the speaker wants to identify the nature of the gratitude as involving the hearer's sacrifice/extra favour, or simply as thanks for her/his socially expected favour. The choice depends on the social relationship between the speaker and the hearer as well as the nature of the favour. The speaker straightforwardly expresses gratitude when s/he has a friendly relationship with the hearer, in which doing/returning a favour is taken for granted. When the speaker does not have such a friendly relationship, the hearer's granting a favour is noticed and attended to as something 'extra', for which the speaker would express gratitude by uttering '*sumimasen*' (see also Ide 1998).

or discomfort has affected; the context is likewise the circumstances of the speech situation in which the offence was made, or the inconvenience or discomfort that was caused without remedial measures having been taken. The illocutionary effect is to express regrets either for the offence or the inconvenience or discomfort, or both. The Japanese linguistic/societal conventions thus allow speakers to perform the illocutionary act of apologizing without committing themselves to the belief that they made an offence.

Politicians make the best use of this type of apologizing: by performing the act, they show that they are sorry, but they do not admit that they made an offence, and, therefore, do not have to take remedial measures such as resigning. At the plenary session of the House of Representatives on the 22nd of January 2016, Akira Amari (Minister of State for Economic and Fiscal Policy) said the following with regard to the allegation that he had received money in return for favours:[8]

(1) Shuukanshi-hoodoo-de osawagase-siteiru-ken-ni-tsuite-wa taihen mooshiwakenaku- omotte-orimasu.

The (literal) English translation is "Concerning the disturbance made by the weekly journal report, I feel I am deeply sorry'. The utterance '*mooshiwakenai*' means, like '*sumimasen*', that the addressee is sorry and there is no excuse for her/his conduct. Amari apologized[9] for the cause of the disturbance, which was the allegation that he had received money, but he did not commit himself to the belief that he had made an offence, that is, he did not admit that he had received any money: he apologized because the allegation caused discomfort to his supporters and the general public. Because he apologized but did not admit the offence, he managed to stay in office, but not for long: he resigned a week later, on the 28th of January.

The act of apologizing specified by the Japanese linguistic/societal conventions is further differentiated by the types of social relationship between the addresser and the addressee, and (in)formality of the context. An addresser who is socially lower than the addressee manifests this by using the honorific utterance, '*sumimasen*' or '*mooshiwakearimasen*', with the honorific particle '*masu*' (here in its negative form *masen*), or the superlative honorific utterance, '*mooshiwakegozaimasen*' with the superlative honorific particle '*gozaimasu*'. The addresser who is socially equal to, or higher than, the addressee manifests this by using the plain (non-honorific) utterance, '*sumanai*' or '*mooshiwakenai*'. The formal context of apologizing is likewise manifested by the honorific utterances.

8. https://www.youtube.com/watch?v=1X8E2cGAQIo

9. His utterance was accepted as an apology, appearing as an entry in the *Asahi Newspaper Digital* on the same day it was reported: http://www.asahi.com/articles/ASJ1Q54MMJ1QUTFK00S.html

Japanese is rich in honorifics, and the use of the honorific '*desu*'/'*masu*' or the superlative honorific '*gozaimasu*' indicates that the addressee is socially higher than the addresser, and/or that the context of the illocutionary act is formal. Honorifics in Japanese are a grammatical category, and their absence does not mean that the utterance is neutral as to the social relationship or to the formality of the context. It rather indicates that the addresser is socially equal to, or higher than, the addressee, or that the context is informal.

What this means is that in Japanese, there is an extra social layer of performing an illocutionary act. A speaker initiates a social type of communicative exchange and a hearer is invited to engage in it. For example, when a speaker performs the illocutionary act of apologizing by producing the honorific utterance '*sumimasen*', s/he does not only initiate the communicative exchange in which s/he expresses regrets for the past offence/discomfort that s/he made/caused the hearer who suffered from it. The speaker also initiates the social type of communicative exchange in which the speaker is socially lower than the hearer, or in which the context is formal. When the hearer acknowledges the illocutionary effect and accepts the status of addressee of the act, the social relationship between the speaker and the hearer, or the formality of the circumstances of the speech situation is set, just as is the illocutionary effect produced.

A speaker of Japanese chooses to initiate a particular social communicative exchange not only on account of who s/he and a hearer are, and which circumstances characterize the speech situation, but also because s/he wants to have a particular social relationship with the hearer, or keep the speech situation at the particular level of formality. For example, a speaker might initiate a communicative exchange with a non-honorific utterance, inviting his/her boss to engage in it as they are at a drinking party after work. The initiation might be met with rejection by the boss who believes the company hierarchy should be respected even outside business hours. In another context, a speaker might initiate a communicative exchange with an honorific utterance, inviting a new neighbor to engage in it because they do not know each other well. This might lead to the neighbor's responding with a non-honorific utterance, which signals her/his desire to establish a friendship.

The linguistic/societal conventions of a particular language/society provide tools for communication by placing certain prototypes of communicative exchanges at the disposal of users. In addition, such prototypes affect what language users can see and do in the world: some aspects of the world are foregrounded as the context of illocutionary acts, while others are left in the background. Certain addressers and addressees are manifested frequently by commonly performed and culturally preferred illocutionary acts, and language users are likely to identify these acts and the communicative exchanges based on them. Speakers of a language with the honorific system are forced to mark whether they are the addresser who is speaking to a socially-higher addressee (or the addresser in a formal situation) or the addresser who is speaking to a socially-equal/lower addressee (or the addresser in an informal situation). Whether they like it or not, and whether they are conscious of it or not, they implicitly accept through this marking the societal ideology that the social hierarchy and (in)formality of a situation determine how they express themselves.

There is an obvious similarity between the prototypes of communicative exchanges embodied by performing illocutionary acts and Mey's *pragmeme*:

> … the emphasis is not on conditions and rules for an individual (or an individual's) speech act, but on characterizing a general situational prototype, capable of being executed in the situation; such a generalized pragmatic act I will call a *pragmeme*. The instantiated, individual pragmatic acts, the 'ipras' or *practs*, refer to a particular pragmeme as its realization. Since no two practs ever will be identical …, every pract is at the same time an *allopract*, that is to say a concrete and different realization of a particular instantiation of a particular pragmeme.
> (Mey 2001: 221) (the emphases are Mey's)

Mey calls a pragmeme the act that (in the proposed terminology) an addresser performs to an addressee in a context, which is specified by the linguistic/societal conventions that are in force. He distinguishes it from an act, called an 'ipra' or pract, as the realization of the pragmeme: a speaker as the addresser of an illocutionary act performs to the hearer as the addressee of the illocutionary act in the circumstances of the speech situation as the context of the illocutionary act. The essence of Mey's concept of pragmemes is that the procedure of an illocutionary act (specified by the linguistic/societal conventions) characterizes a general situational prototype, which is a generalized "pragmatic act", called a pragmeme. For example, the pragmeme of apologizing is performed by the addresser to the addresser in the context, while a pract of apologizing, which is an allopract of the pragmeme of apologizing, is performed by a particular speaker to the particular hearer in the circumstances of a particular speech situation.[10]

Are the prototypes of communicative exchanges embodied by performing individual illocutionary acts, or Mey's pragmemes either universal or language/society-specific? It is reasonable, as Austin ([1962]1979) says, to assume that our language embodies all the distinctions/connections of communicative exchanges people have found worth drawing/marking, which have withstood the long test of the survival of the fittest in society. In this sense, the prototypes of communicative exchanges or pragmemes are language/society-specific. One example is the hierarchical/formality-conscious prototypes of communicative exchanges or pragmemes embodied by the use of Japanese honorifics. However, since the communicative

10. See Oishi (2016).

exchanges serve the need of building a society and maintaining it, an obligatory joint project within all societies requires the existence of universal prototypes of communicative exchanges.

4. Illocutionary acts in discourse

When a particular illocutionary act is performed and completed, and the conventional effect is brought about, it affects upcoming utterances: the illocutionary effect produced influences the discourse. Marina Sbisà describes this as follows: 'When considering a sequence of moves, it is reasonable to view the output of one move as coinciding with the input for the next' (Sbisà 2002: 72). For example, when a speaker performs the illocutionary act of apologizing in 'I'm sorry' and a hearer completes it, they share the belief that the speaker made an offence to the hearer and the speaker has expressed regrets for the offence. The speaker and the hearer also acknowledge the change of the circumstances of the speech situation: the remedial measure of expressing regrets for the offence has been taken. The speaker of the next turn takes for granted this shared belief and the changed circumstances of the speech situation.

The following part of the script of *The Theory of Everything* illustrates how an illocutionary effect is brought about in discourse. This British-American biographical film is about the late theoretical physicist Stephen Hawking, his diagnosis of motor neuron disease, his success in physics, and his relationship with his (now former) wife Jane Wilde Hawking. Using a computer program, Stephen Hawking, who has by now lost his ability to speak and write, informs his wife Jane that he is leaving her for Elaine Mason, who will later become his second wife.

(2) S(tephen): I have asked Elaine to travel with me to America. She will look after me.
J(ane): Will she?
S: Yes.
J: You always used to tell me when an invitation came in.
S: Another award. What can you do? (a long pause) I am sorry.
J: How many years?
S: They said two.
J: You've had so many.
S: Everything will be okay.
J: I have loved you.

Stephen's utterance 'I have asked Elaine to travel with me to America. She will look after me' can be (i) informing/admitting his love relation to Elaine, or (ii) notifying

Jane that Elaine, who is his nurse, is accompanying him on his trip to America. Jane replies as if taking Stephen's utterance as a notification ('Will she?'); however, by uttering 'You always used to tell me when an invitation came in', she tries to confirm whether there is any significance in his telling Elaine about the invitation but not herself. After the surface response to Jane's utterance ('Another award. What can you do?'), followed by a long pause, Stephen says 'I am sorry' and tries to console Jane by the follow-up utterance 'Everything will be okay'. Looking back at their marriage (which is now coming to an end), Jane says 'I have loved you'.

The utterance 'I am sorry' indicates that Stephen knows the prior utterance ('I have asked Elaine to travel with me to America. She will look after me') makes Jane sad, which confirms the interpretation that the utterance was the act of informing/admitting his love relation to Elaine. The speech situation on which this illocutionary act brings about the effect is the *discursive* situation: the prior utterance is coherently sequenced with the present one, and the speaker and the hearer update shared understandings of effects brought to the discourse.

Oishi and Fetzer (2016) describe illocutionary acts such as this as higher-level illocutionary acts in which the speaker discursively specifies the force of the present (or a prior or upcoming) utterance by indicating how it fits into the discourse. They claim (53–54) that these acts belong to Austin's category of *expositive* illocutionary acts:[11]

The speech act type of expositive as put forward by Austin (1975: 161–63) provides a tool for the analysis of discursively contextualized locutionary meaning and illocutionary force. Austin provides the list of expositives as follows:

1. affirm, deny, state, describe, class, identify
2. remark, mention, ?interpose
3. inform, apprise, tell, answer, rejoin
   a. ask
4. testify, report, swear, conjecture, ?doubt, ?know, ?believe
5. accept, concede, withdraw, agree, demur to, object to, adhere to, recognize, repudiate
   a. correct, revise
6. postulate, deduce, argue, neglect, ?emphasize
7. begin by, turn to, conclude by
   a. interpret, distinguish, analyse, define
   b. illustrate, explain, formulate
   c. mean, refer, call, understand, regard as (Austin 1975: 162)

11. Question marks in the reference are Austin's own.

Oishi and Fetzer (2016: 54) conclude:

> Expositive acts of expounding a view, conducting an argument, and clarifying a usage or a reference (Austin 1975: 161) are higher-level illocutionary acts and thus fulfill a metacommunicative function. In performing an expositive illocutionary act, the speaker makes manifest how illocutionary force and locutionary meaning are intended to be contextualized discursively in context, at a particular stage in discourse. In doing so, the speaker as the addresser of the illocutionary act makes manifest her/his intention of producing a perlocutionary object or sequel.

The effect of the expositive illocutionary act type provides the input of the following illocutionary act, while developing the discourse. Stephen's act of informing/admitting brings about the effect which motivates his act of trying to console Jane, whose effect, in turn, motivates Jane's act of accepting that their marriage has ended, where each utterance is coherent with the preceding and following utterance.

The effects brought about in discourse by expositive illocutionary acts include understandings of a speaker, a hearer, and circumstances of a speech situation, and, therefore, those acts can bring about the effect of another illocutionary act simultaneously.

Owen (1983: 124–126) identifies a class of sentences which can function as an indirect performance of the act of apologizing:

(3) a. I wish I hadn't done that
b. I regret having done A
c. I stepped on your foot
d. I am interrupting you,
e. I am about to hurt you (said by a dentist)
f. It was wrong of me to do that
g. Would you rather I hadn't done that?
h. I believe you would rather I hadn't done that
i. That didn't do you any good/benefit you
j. I believe X harmed you Owen (1983: 125)

Following Searle's (1979: 31) idea of indirect speech act (i.e. 'one illocutionary act is performed indirectly by way of performing another'), Owen examines, as candidates for such a class, sentences in which the observance of Searle's four rules of performing the apologizing act is asserted. In the sentences (3a) and (3b), the observance of the sincerity rule is asserted: the speaker regrets a certain conduct. In the sentences (3c) to (3e), the observance of the propositional content rule is asserted: the speaker's conduct is reported. In the sentences (3f) to (3j), the observance of the preparatory conditions is asserted: the hearer suffers from the speaker's conduct, and the speaker believes the hearer to be suffering from it. Owen, however, claims that to utter any of these sentences is, simply or strictly speaking, not to perform the act of apologizing, and, therefore, concludes that the existence of a natural class of sentences which can perform indirect speech acts of apologizing is doubtful, and that, even if there is such a class, its members cannot be predicted from the rules (Owen 1983: 125–126).

Opposing Owen's pessimistic view, Oishi (2013) maintains that: "Uttering the sentences in (1a) to (1j) can be the illocutionary act of apologizing when one or more of the elements of the act of apologizing is implied by them, and the rest is taken for granted by the speaker and the hearer, or indicated contextually or otherwise" (535–36). Oishi re-analyzes Owen's class as follows:

> … sentences ([3]a) and ([3]b), and sentence ([3]f) imply that the speaker is the addresser of apologizing: the speaker is expressing her regret for her past conduct. … sentences ([3]c) and ([3]d), sentences ([3]g) and ([3]h) imply that the circumstances of the situation are the context of apologizing: the hearer suffers/has suffered from the speaker's past conduct. Uttering sentences ([3]i) and ([3]j) implies that the circumstances of the situation are the context of apologizing if the conducts referred to by "that" in ([3]i) and "X" in ([3]j) are understood as the speaker's conduct, and the expression "didn't do you any good/benefit you" in ([3]i) is litotes.

Oishi (2013) also analyzes the nine strategies of apologizing Fraser (1981: 263) distinguishes (in [4]), and the five strategies of apologizing distinguished by Olshtain and Cohen (1983: 22) (in [5]):

(4) a. announcing that you are apologizing,
b. stating one's obligation to apologize,
c. offering to apologize,
d. requesting the hearer to accept an apology,
e. expressing regret for the offence,
f. requesting forgiveness for the offense,
g. acknowledging responsibility for the offending act,
h. promising forbearance from a similar offending act,
i. offering redress.

(5) a. an expression of an apology,
b. an explanation or account of the situation,
c. an acknowledgment of responsibility,
d. an offer of repair,
e. a promise of forbearance.

Oishi (2013: 537) analyzes Fraser' (1981) nine strategies as follows:

> Strategies ([4]b), ([4]e), and ([4]g) are used to imply that the speaker is the addresser of the act of apologizing, through the description of the speaker's obligation, regret, and responsibility, respectively. Strategies ([4]a), ([4]c), ([4]d), and ([4] f) are used to imply that the utterance is the communicative move of apologizing, through the identification of the utterance with (i) an announcement (in ([4]a)) or offer (in ([4]c)) of an apology, or with a request for the hearer to accept an apology (in ([4]d)) or to forgive the speaker (in ([4]f)). Strategies ([4]h) and ([4]i) are used to imply that the speaker has the intentions of the addresser of apologizing, through the description of the speaker's intention of avoiding a similar conduct (in ([4]h)) or redressing (in ([4]i)).

Similarly, Oishi (2013: 537) analyzes the strategies of Olshtain and Cohen as follows:

> Strategy ([5]c) and ([5]b) are used to imply that the speaker is the addresser of apologizing, and the circumstances of the situation are the context of apologizing, respectively. Strategy ([5]a) is used to imply that the utterance is the communicative move of apologizing. Strategy ([5]d) and ([5]e) are used to imply that the speaker has the intention typical of the addresser of the act of apologizing.

These analyses of Oishi's (2013) can be restated as follows: these utterances are expositive illocutionary acts, and their effects brought to the discourse, as the understandings of the speaker's obligation/regret/responsibility, the hearer's suffering or the lack of remedial measures in the speech situation, indicate or imply that the speaker, the hearer, or the circumstance of the present speech situation is the addresser, the addressee or the context of apologizing, respectively. As a result, these utterances bring about the effect of the act of apologizing simultaneously.

5. Conclusion

Language users do things with words adapting themselves to linguistic/societal conventions. Using those conventions, they initiate or complete a particular communicative exchange, in which they become the addresser or addressee of a particular illocutionary act, while identifying circumstances of the speech situation as a particular context. Performative verbs provide an inventory of possible illocutionary acts (i.e. possible communicative exchanges), and the societal conventions highlight the addressers, the addressees, and the contexts of the illocutionary acts which have been societally accepted.

When learners acquire a new language, they learn, and adapt to, a whole new set of linguistic/societal conventions. They learn new illocutionary acts that are specified by the linguistic conventions of the new language, and the addressers, the addressees and the contexts of those acts. Using the new language in a new speech community, they go through experiences in which they, the hearer and the circumstances of the speech situation are specified either (i) as the addresser, the addressee and the context of the illocutionary acts with which they are familiar, or (ii) as those of a totally new illocutionary act. As was shown by the examples of the illocutionary acts performed in Japanese, learners also learn to initiate a particular social type of exchange while performing a particular illocutionary act, and complete the social type of communicative exchange. By initiating or completing those communicative exchanges, they share with a communicative partner the understanding of the social relationship and the formality level of the speech situation.

The linguistic/societal conventions which specify expositive illocutionary acts are a unique type. The speaker brings about a particular interpretation to the discourse and tries to share it with the hearer. To perform an expositive illocutionary act can be to perform another illocutionary act simultaneously.

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CHAPTER 3

Adapting to changing concepts of time

From life to fiction

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Time concepts have been developed throughout human history and different academic disciplines have theorized time. What is more, people's time regimes have changed through adapting to the introduction of new techniques of production. After discussing changing conceptions of time in the life of human beings the article focuses on a science fiction account of a different view of time represented by aliens in the short story "Story of Your Life" by Ted Chiang (2002). The story features interactions of a linguist (and physicists) with aliens. The paper looks at how the main protagonist slowly adapts to the mode of simultaneous time reflected in the alien's grammar (which means the simultaneity of past, present and future) when learning their language and analyses how this is represented linguistically in the story.

Keywords: time concepts, (new) technology, space-time, time travel, science-fiction

1. Introduction

Human beings have developed different concepts of time and have adapted to time in the course of history, mostly in connection with technological innovation: from time concepts connected to their natural environment such as change of seasons, day and night, and human activities connected to these, to the development of calendars and the constant presence and awareness of passing time through digital clocks which permeate our lives through their constant presence in modern technological devices.

Different concepts of time have also been attributed to different cultures. Edward Hall (1959, 1983) distinguished between monochronic and polychronic time, arguing that the former is characteristic of western cultures whereas the latter can be found in many South American and Asian cultures. The character of new technologies which both allow and even force constant availability and urge for

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communication appear to shift people's conception of time from a monochronic to polychronic conception. They have even been said to exist side by side through the advent of modern (communication) technologies. How do people experience this change and how do they adapt to it?

The introduction of any new technology has been accompanied by discussions about speeding up (work) processes and accelerating life (Nielsen 2009, Rosa 2014). While industrial capitalism introduced rigid time discipline, our present increased mobility by mobile communication devices can transform temporal patterns of individual workers and result in new forms of work: virtual teams, virtual offices, or virtual organizations (Lee & Whitley 2002: 238). These new forms require that people adapt to, and engage in more simultaneous modes of work through multitasking. In addition, modern communication technologies are said to have changed our conception and experience of both space and time, even to the extent that scholars have argued that space and time have collapsed through (the use of) digital technologies and created a 'continuous present' (see Reading 2012: 144). However, as Tenbrink (2007: 30) has argued, there are conceptual differences between time and space: e.g., time is one-dimensional, space three-dimensional, and so on.

All of us have experienced that time has seemed to accelerate through our lifetimes. On the one hand, this is due to differences in how we experience time at different points in our lives, yet on the other, it is connected to the constant development of new technologies which we make use of, both in work and private settings. The question is whether there is just a difference in pace or also in quality or type.

After discussing changing conceptions of time in the life of human beings, the present article focuses on a science fiction account of a different view of time, as represented by the aliens in "The Story of Your Life" by Ted Chiang (2002). The story features interactions of a linguist (and some physicists) with aliens whose spoken and written versions of language are very different. Unlike the grammar of human language, the latter's language has a two-dimensional grammar which reflects their simultaneous modes of time. I will look at how the main protagonist slowly adapts to simultaneous time (which means the simultaneity of past, present and future) when learning the aliens' language, and how this is reflected linguistically in the story.

2. Theories about time

Theorizing about time has been characterized by two main, differing views. On the one hand, time has been regarded as a natural phenomenon which is considered as an objective fact (a view proposed by Newton); in this, it is like other objects, except that it cannot be perceived independently of human observers. This physical

/physicalist view sees time as an aspect of physical nature, an unchangeable variable which is measured by physicists and plays a role in equations which symbolically represent laws of nature as well as 'social' time. On the other hand, time has been conceived of as subjective, based on human nature and experience (as proposed by Descartes, or Kant; see Elias 1984, x–xi). The latter time has the character of a social institution, regulating social events; it can be viewed as a mode of human experience (Elias 1984: 93).

2.1 Time in the natural sciences

In the natural sciences, the conception of (physical) time has changed quite substantially over the years. Aristotle and Newton believed that time is absolute, i.e. they were convinced that the interval of time between two events could be measured in absolute terms and this time would be the same whoever measured it and wherever it was measured. They also saw time and space as completely independent of each other (Hawking 1996: 21).

The theory of relativity, however, discards absolute time, positing that each observer has their own measure of time depending on where they are and how they are moving, even if the different observers were to have identical clocks. The theory of relativity was developed on the basis of the observation that "the speed of light appeared the same to every observer, no matter how he was moving", which abandons the idea of absolute time (Hawking 1996: 162). The view that space and time are dynamic also changed our view of the universe from an unchanging to a dynamic, expanding one "that seemed to have begun a finite time ago, and that might end at a finite time in the future" (Hawking 1996: 39).

Scientific theory, aiming at unifying gravity with quantum theory, needed to introduce the idea of an 'imaginary time' which is indistinguishable from directions in space. In 'imaginary time' there is no difference between going forward and going backward, which means there would not be any difference between past and future. In 'real time', by contrast, there is a huge difference between the backward and the forward directions, i.e. between the past and the future. We can remember the former but not the latter (Hawking 1996: 163). If a teacup falls from the table we can see the pieces lying on the floor afterwards. However, it is not possible to assemble the pieces again and moving the whole cup back on to the table. There is a direction to time which can be represented in a least three directions: one of them is that of the second law of thermodynamics which states that "in any closed system disorder, or entropy, always increases with time" (Hawking 1996: 164). Applied to the teacup case, this means the broken cup is in a state of disorder, which occurs subsequently to the state of order represented by the whole cup. In addition to the thermodynamic direction, there is a second, psychological order of time; "[t]his is the direction in which we feel time passes, the direction in which we remember the past but not the future" (ibid.). The third order is the cosmological direction of time, "in which the universe is expanding rather than contracting" (ibid.).

When considering the question of whether time travel is possible, one has to assume (as many science fiction writers have done) that the speed of travelling has to exceed the speed of light. According to special relativity theory, nothing can travel faster, so the only other conceivable way to travel back in time is if it might be possible to warp space-time and thus produce a shortcut between event A and B by creating a 'wormhole' between two nearly flat regions which are far apart (Hawking 1996: 178–179). Time travel, the possibility of which remains open in Hawking's view, creates some paradoxes, though: One could assume that time travel is confined to the future (since we have not yet observed visitors from the future), while the past is fixed because we have observed it. What is more, if we were able to go back and change the past, e.g. killing our grandfather while he was still a child, this would create a paradox; for where would *we* be? (Hawking 1996: 183).

2.2 A social theory of time

The sociologist Norbert Elias (1897–1990) holds that time is neither an innate property of the human mind nor a quality of the external world. He views it rather as the result of humans' capacity of synthesis which enables them to view consecutive events in their temporal succession, but also to form a mental picture of what happened, both earlier and later, and connect this to the present.

The measuring of time in pre-industrial societies is almost always based on connecting what we have separated into natural, physical, social or human processes and events (Elias 1984: 70). It is difficult to think and talk about time in a way which is not based on the tacit assumption that physical time, biological time, social time and experienced time are totally unrelated to each other. This is a distinction based on the conceptual dichotomy between 'nature' and 'society', 'subject' and 'object' in the symbolic representation of our universe. Clocks are an integral part of the social order; it does not function without them. Clocks do not register time: they are mechanical moving devices of a specific type, used by humans for their own purposes (ibid.: 96). Elias believes that an investigation of time needs to form a connection between humans and nature and thus investigate humans in nature. What is more, he argues that time (and space) are basic means of orientation in our social world (see Elias 1984: 72–73).

Elias further states that the idea we have about time becomes part of ourselves. It becomes part of our personality and appears as self-evident to the extent that we do not seem to be able to experience the world in any other way. Changes in the traditions (of time) and the personality structures connected with these traditions have frequently been experienced as difficult and painful processes which often took three generations to complete. These traditions and structures are often seen as natural and innate (and shared with the people around us); hence we are frequently unable to understand those who have different conceptions of time. However, a socially acquired, 'epigenetic' structuring of human nature can be just as coercive and inescapable as are the genetically determined structures of a person (Elias 1984: 119–122).

3. Adaptability and the temporal nature of experience

Human beings have always had to adapt to their experience of time, and all human cultures have reacted in different ways to the temporal nature of experience. Klein (1994: 1) lists three of these:

1. Actions are planned and done in accordance with time (there is a time to plant and a time to harvest, etc.), i.e. time as related to events;
2. Inventing methods of time measurement by linking the event whose duration we want to measure to some other (type of) event which is supposed to occur regularly (e.g. the sequence of the seasons, the rising and setting of the sun, the swing of a pendulum, etc.); the results are calendars and clocks;
3. Speaking/writing about time: All languages have developed various devices for this (like verbal tenses, adverbs of time, time tables, etc.).

In sum, human beings have always related time to natural or social events in their lives; they have invented methods of measuring time; and all languages are equipped to express time in some way.

3.1 Culture and concepts of time

In anthropology, time has long been seen as a product of the human mind, rather than as a constant which transcends culture. The British anthropologist E. E. Evans-Pritchard, for example, divided the time system of the sub-Saharan tribe of the Nuer into ecological and structural time. Ecological time encompassed all the temporal aspects of time in Nuer cosmology such as seasons, annual cycles, movements of animals, while structural time was based on events and components of cultural and social life. Evans-Pritchard also stated that the Nuer did not view time as a continuum but rather as a constant between two points, a fixed channel through which generations and groups moved (Hall 1983: 78–79).

The American anthropologist Edward T. Hall (1914–2009) developed a highly influential distinction in concepts of time in his contrast between monochronic time (M-time) and polychronic time (P-time; Hall 1983: 46). Monochronic time is characterised by people doing one thing and paying attention to one thing at a time; time is linear, segmented and compartmentalized. The essence of polychronic time, on the other hand, is that it allows us to engage in multiple activities simultaneously. Whereas the former divides time into separate chunks and views it as linear, the latter stresses the people's involvement and the completion of transactions rather than following a strict pre-set schedule. Fixed appointments do not need to be kept and can easily be broken (as is notoriously the case in the Middle East or Latin America). M-time is based on strict scheduling, seals off one or two people from the group while doing their business, and intensifies the relationships within the latter group, while providing for some privacy. In contrast, in P-time we are dealing with a number of people and activities at the same time, also in semi-official contexts such as waiting rooms or offices where officials might attend to business. By moving between their offices and the waiting area they may be giving people the impression of participating in the scene, even when they are not being helped directly. P-time is oriented to people, whereas M-time is oriented to tasks. Hall considers M-time as characteristic in particular of American official and work settings, but admits that P-time also exists in people's private lives, e.g. in the homes where children have to be taken care of while household chores need to be dealt with at the same time (1983: 52). Hall even argues that P-time can be seen as 'female' time while M-time is 'male' time (ibid.: 52).

3.2 Time in language

All languages have developed devices to speak about time. These include tense, aspect, adverbs of time, among others. Generally, the tense system of a language encodes time as it encodes states and events in the deictic world of the speaker. In addition, the modality systems of languages represent the world of possibility and imagination/desire. These two systems are frequently closely intertwined in languages (see Yuego Gu 2012: 544).

Language also expresses concepts of time reflected in the metaphors that societies use with respect to time. Lakoff and Johnson (1980: 41–45) argue that in Western societies, two dominant conceptions of time co-exist. The metaphor of TIME AS A MOVING OBJECT projects a front-back orientation of time in the direction of motion. In this conception, the future is moving towards us and we are facing the future, as is illustrated in expressions like: "The time will come when…", "The time for actions has arrived…", "Coming up in the weeks ahead: …": "I can't face the future", "Let's meet the future heads on" (ibid.: 43). Second, a metaphor

TIME IS STATIONARY AND WE MOVE THROUGH IT can be identified, as in: “As we go through the years”, “As we go further into the 1980s”, “We are approaching the end of the year” (Lakoff & Johnson 1980: 44). These conceptions of time are viewed as subcases of the same metaphor; they fit together, albeit not always in a consistent manner. In both cases, though, time is clearly conceptualised as a sequential movement (Lakoff & Johnson 1980: 44).

As in other fields, also in linguistics the assumption that temporal and spatial concepts are to a large extent identical is widespread. It has frequently been argued that time is conceived of in spatial terms. The conceptual metaphor TIME IS SPACE, for example, takes many forms and variants not only in different languages, but also in one and the same language; as Tenbrink has it, “Time is moving”, from the past to the future; this conception is also realised in expressions such as ‘before’ or ‘after’ noon (Tenbrink 2007: 16). Traugott, on the other hand, is more cautious when she argues that “synchronically an exact correlation between spatial and temporal terms is infrequent, if not unknown” (1978: 373; quoted in Tenbrink 2007: 14).

Tenbrink (2007) further points out that there are essential differences between time and space. Time is conceived as one-dimensional (linear), space as three-dimensional. Linearity, sequentiality, and directionality exist both in time and space, but they play very different roles in the respective domains. Linearity is crucial for time, as any event which is not simultaneous or overlapping takes place before or after an event. Entities in time are frequently conceived of as related through notions of causality, whereas entities in space may be functionally related. Because of their greater complexity and flexibility in space, spatial relations need to be expressed through systems of reference and perspective, whereas temporal relationships (e.g. those expressed by ‘before/after’) are unambiguous and cannot be interpreted from different points of view (Tenbrink 2007: 25–26).

Across different languages, people use spatial metaphors to represent time. These spatiotemporal metaphors differ, which influences their conceptions of time (Boroditsky 2000, 2001, 2011). Other aspects which play a role are the spatial representations and reference frames available in people’s immediate context or culture, organizational patterns in cultural artifacts (e.g. writing systems), aspects of cultural and individual disposition, age and experience (2011: 334).

Boroditsky (2000) has provided empirical evidence that time and space are related in terms of their conceptual structure. Even the spatial metaphors which people use in their own language influence their conception of time, e.g. whether temporal events are structured with respect to each other (object-moving metaphors such as ‘Wednesday is *before* Friday’) or the speaker (ego-moving metaphors ‘The worst is *behind* us’) Boroditsky (2000: 5). In addition, Boroditsky (2001, 2011) has demonstrated that Mandarin speakers tended to use vertical patterns of space-time associations which are consistent with the vertical space-time metaphor of Mandarin. English speakers, on the other hand, rather expressed horizontal associations. It was also shown that increased experience with vertical time expressions of English learners influenced them as they represented time more often vertically in effect.

Fuhrman et al's. (2011) study of the conceptions of time of English and Mandarin speakers showed similar results: whereas English speakers rely largely on horizontal terms in their temporal reasoning, Mandarin exhibits a vertical top to bottom pattern of time. The Mandarin informants created spatial representations in their temporal reasoning which corresponded to their respective linguistic patterns, even when performing non-linguistic tasks. Interestingly, both groups exhibited a left-to-right orientation of time, in line with their usual writing direction.[1] The authors conclude that "[h]ow people conceptualise time appears to depend on how the languages they speak tend to talk about time and also on the particular metaphors being used to talk about time in the moment" (Fuhrman et al. 2011: 1324).

Changes in patterns and experiences of time in history

According to Elias (1984: 118), cultures' differences in experiencing time are acquired socially. Like other aspects of civilization, such differences are reflected in the different social habitus and personality structures of humans belonging to different societies; such differences are particularly notable if the societies involved represent different steps on the ladder of social evolution. To some extent, moreover, if in our own culture the experience of time differs according to sex and age, societal class, occupation, the more so it will vary from culture to culture and (as was shown above), historically.

Hall (1959: 177–179) has identified four factors which contribute to our subjective impressions of duration of ('informal') time. The first is *urgency*. In our experience, the more urgent the need, the more time seems to drag on. *Monochronism*, i.e. the habit of operating 'monochronically' (i.e. doing one thing at a time, one after the other; see above) also influences our individual experience of time, as do *activity* (we distinguish between phases of activity and dormant phases: in other cultures this difference is not relevant) and *variety*, which influences our demand for new things and is associated with external events (with greater variety, time moves more rapidly; it should be noted, though, that having variety in one's life is not equally important in all cultures).

In pre-industrial societies the social patterning of time has been shown to follow the cycle of work or domestic chores, such as taking cattle to the grazing ground, or milking cows (in farming communities), or the rhythm of the sea (in

1. Note that Mandarin also allows for a top-to-bottom direction of writing; however, it is harder to correlate this direction with the time dimension.

fishing communities; Thompson 1967: 58–60). In peasant societies and village and domestic industries, the notation of time centers around task orientation. Those tasks which are considered as necessary within the course of the day are attended to. 'Work' and 'life' intermingle and are not clearly marked off against one another; the day contracts or expands, depending on the tasks which have to be completed (see Thompson 1967: 60).

The advent of industrialisation, and in particular, the burgeoning employment of workers in a system based on the division of labour, shifted the orientation of the work process from task to timed labour. Throughout the 18th century and well into the middle of the 19th, when domestic, small-scale and outwork industries still existed, irregular work rhythms dominated. Times of intense labour alternated with periods of idleness in a pattern which was controlled by the workers themselves. Even in our times, this rhythm still seems to prevail among certain self-employed groups who are free to organize their own workdays, such as artists, writers, small farmers (and today also frequently, students). This raises the question whether or not this kind of patterning is a 'natural' rhythm for human work (Thompson 1967: 73).

With progressing industrialisation and the creation of factories, the distinction between 'employer time' and 'own time' becomes crucial. A clear demarcation between 'work' and 'life' becomes a characteristic feature of mature industrial societies: "not the task but the value of time when reduced to money is dominant. Time becomes a currency: it is not passed but spent" (Thompson 1967: 61). In fact, the work regimes which were introduced in connection with industrialisation have completely changed the time patterns in people's lives. In addition, technology and new production techniques have not only changed people's patterns of time, but also the speed of their lives, as will be illustrated in the next section.

4. Time and the introduction of new technology

Human beings have used tools and instruments as extensions of themselves since the beginning of humankind. Such extensions have even been developed by animals (bird nests or spider webs could be examples); they can be defined as external manifestations of needs, knowledge, adaptation to the environment, etc. In contrast to animals, humans have evolved their extensions to an extremely high degree, to the extent that they may be confused with the reality they replace and even result in transference, when they take the place or process which they originally were meant to extend (see Hall 1983: 129–131). For example, computers extend our memory and our capacity for calculations, but we have to be careful not to lose our memory function altogether and totally 'outsource' it to computers.

A fairly early example of an extension can be seen in the development of writing, which has been described as the 'technologization of the word' by Ong (1982). Writing has had a profound influence on our thinking and has even made some linguists view it as the basic form of language. Similarly, any new technology bears the danger of replacing reality by its extension – in what could be seen as an extreme form of adaptation,

The introduction of any new technology has been accompanied by discussions about speeding up (work) processes and accelerating life (Nielsen 2009; Rosa 2014). Thus, ever since the development of the telegraph it has been argued that advancements in electronic communication have been changing our conception and experience of space and time (Kern 1983, 2003; Schwarzenegger 2012: 128). Terms such as 'time-space distanciation' (Giddens 1990) or 'time-space-compression' (Harvey 1990) have been used in particular with the spread of the new media, as have 'simultaneousness' and 'synchronicity' (Schwarzenegger 2012: 128).

The concept of simultaneity had already appeared in a variety of fields such as physics, psychology, art, literature, and cinema around the turn of the 20th century (Kern 2003: xiii). It has also been argued that the past and the future are collapsed through new communications technologies and result in a continuous present – a view which was expressed with the advance of new transportation and communication systems as early as a hundred years ago (Kern 2003: xiii; see Reading 2012: 144). In other words, time is accelerated and collapsed through (the use of) (digital) technologies.

Changes in our experience and uses of time have been attested in various areas of life, even with respect to playing games. While traditional (children's) games follow a line of activities, computer/digital games follow a different game time as they can be "paused, re-loaded, restarted, recorded, connected to others on-line in different time zones, and started again" (Reading 2012: 144–145).

New information technologies have also been discussed in connection with globalisation, as they penetrate our everyday lives to such an extent that life in the twenty-first century has been assigned a place within a '*globital memory field*' which "involves multiple temporalities and experiences of time" (Reading 2012: 145).

Studies at the organizational level have shown that the introduction of new information technology speeds up business processes by shortening production/consumption cycles, thus saving time for the organization (Lee & Whitley 2002: 237). Even so, very few studies have focused on the mechanisms underlying these changes. Applying Hall's concepts of monochronic and polychronic time, technological innovation has been shown to possibly have an effect on both; thus, Barley's (1988) study on the impact of computer-based radiology equipment on temporality and social relations in hospitals revealed that the new equipment increased "the monochronicity of radiologists' work by restructuring the duration, sequence, temporal location, and rate of recurrence of events. This, in turn, enhanced the symmetry of the temporal organization between the radiologists' and technicians' work" (see Lee and Whitley 2002: 237). Lee and Whitley's own (2002) study, on the other hand, showed that polychronicity, too, was increased when new information systems were implemented in an organization; by creating a temporal symmetry between work groups interacting with each other they transformed employees' temporal work profiles (ibid.: 237). Thus, in their study of a software development organization, they were able to show that work in this kind of context is increasingly complex and polychronic, as individuals spend time on a wide range of projects and activities during the day and use different social spaces at different times to be able to manage their workload (Lee & Whitley 2002: 238).

On the individual level, changes in time-frame patterns may also result. For example, virtual reality technology enables us to project various future scenarios which we have never experienced, and thus allows us to experience 'future' or unexperienced events; similarly, "increased mobility by mobile communication devices can transform temporal patterns of individual workers" (Lee & Whitley 2002: 238). On the organizational level this leads to virtual teams, virtual offices, or virtual organizations.

Mobile telephones, for example, have had a substantial impact on individuals, both in their work contexts and private lives, and have altered how they organize their world. In many cases, information technology has changed both time and space patterns, for example in the case of 'teleworking' (e.g. the remote teaching or counseling that has become obligatory in times of major societal disruptions caused by epi- and pandemics). In a modern organization, the rigid time discipline which was created by early industrial capitalism may have to change when managing and controlling workers in virtual work environments, since project-based work is very different from earlier routines and provides room for polychronic work practices (Lee & Whitley 2002: 239).

5. Multitasking – moving towards simultaneous time and P-time?

Multitasking is defined by "making simultaneous demands upon our cognitive or physical faculties" (Baron 2008: 37); it is a common feature of our everyday lives when, e.g., driving a car, playing the piano, or reading a musical score. Multitasking basically means doing more than one thing at a time. This definition is closely connected to what has been introduced above as the concept of polychronic time.

Modern electronically mediated communication (EMC) invites multitasking in communication, e.g. talking on the phone and reading/writing e-mails at the same time, or participating in multiple IM (instant messaging) communications. With respect to media usage, multitasking has become increasingly common among adolescents and young adults using computers, videos, mobile phones, and gaming devices. In recent years, multitasking has been discussed with respect to its cognitive and social aspects and its effects on (interpersonal) communication (Baron 2008: 36–43).

With regard to performance, *cognitive multitasking* refers to the mental consequences of doing more than one thing at a time (such as watching television while doing homework or doing a cross-word puzzle and completing a questionnaire). Psychological studies have shown that most cognitive multitasking, e.g. watching TV while doing one's homework, negatively affects performance, in particular if it involves the same cognitive modality, e.g. seeing; when different modalities are involved, e.g. seeing and hearing, the results are slightly better (Baron 2008: 36–37).

A study by Crook and Barrowcliff (2001) showed that students who simultaneously listened to a lecture and accessed the internet remembered less of the lecture's content (Baron 2008: 39). Negative effects of multitasking on academic performance have also been identified by Junco and Cotton (2012), as has the use of Facebook during study activities (Kirschner & Karpinski 2010). Continuous multitasking has been said to result in people's 'post-multitasking behaviour' or 'continuous partial attention', caused by the desire to be present in the communication network at all times in order to see what is going on and to optimize one's opportunities (see Baron 218–219). However, Baron also found that students who had grown up with the technology may not experience a negative effect on performance when "engaging in simultaneous computer-based activities", as these are considered to be "domesticated technologies" (Baron 2008: 39).

Due to the lack of sufficient studies the results are not conclusive; yet arguably, those who have grown up with new technologies may have adapted to them to some extent. One issue which would need to be taken into account is whether the simultaneous activities ultimately serve one and the same goal, or whether the diverse activities are in competition, as for example when using Facebook as a distraction from a tedious task.

With regard to *social multitasking*, Baron's study is concerned with the social effects of doing more than one thing at a time, such as writing an e-mail or engaging in instant messaging (IM) while one is involved in face-to-face conversation (Baron 2008: 37). Research on the effects of social multi-tasking is still largely lacking, yet Baron's focus group research has shown that students tend to use IM both synchronously and asynchronously (depending on their interest in the current topics), yet hardly ever simultaneously. Nevertheless, even if they did not engage in other activities, the students did not see IM as a necessarily stand-alone activity. One group of students said they did multitasking on the computer because the technology enabled this. IM'ing, listening to music, or browsing the web were considered as appropriate multitasking activities as they did not interfere with each other. Carrying on face-to-face (or telephone) conversations simultaneously with doing IM were not considered appropriate multitasking activities, as attending to both successfully was considered problematic. Yet, in a University of Kansas study (Baym et al. 2004), 74% of students (out of 500 informants) said they were multi-tasking while engaging in face-to-face communication (Baron 2008: 42–43).

A study by Hewlett-Packard (2005) showed that office workers considered it rude if colleagues answered e-mails or text messages while communicating face-to-face (see Baron 2008: 42). Similarly, Baron (2008: 43) found that people on the telephone with another person were annoyed when they heard the other person using the keyboard; they interpreted this as a lack of attention on the part of their interlocutor.

The question here seems to be whether simultaneous activities in multitasking support a main activity (e.g. gaming or a group project) or whether attention is diverted from one activity/goal and is considered as such in cognitive or social terms. In internet gaming, for example, gamers might get involved in chats and or telephone conversations during gaming, which may ultimately serve the goal of winning the game. Many gamers become extremely skilled in this type of multitasking and have adapted to dividing their attention between the various modes of (inter) action without feeling that this has any negative cognitive or social consequences.

With regard to the question of whether multitasking is similar to acting in polychronic time, there is no clear answer. In Hall's studies of societies with polychronic time, simultaneous activities seemed to be socially accepted. However, this only appears to be partially the case in modern western (globalized) societies.

6. Simultaneous consciousness and time: The science fiction short story "Story of Your Life" by Ted Chiang (2002)

This science fiction short story features interactions of American scientists (physicists, linguists and military) with aliens. The story's main protagonist, the linguist Dr. Louise Banks, while narrating its events, intersperses her narration with a second-person narrative in which she addresses her daughter using the second person 'you'. The aliens are called 'heptapods' and are described as creatures with seven limbs (which could be used either as arms or legs), arranged in radial symmetry. The spoken and written versions of the aliens' languages are very different. Their writing, which is based on logograms/semagrams (roughly corresponding to words in human languages) is not arranged sequentially, but done by joining semagrams and by rotating and modifying them. The linguist in the story defines this writing as 'semasiographic', "with its own system of rules for constructing sentences, like a visual syntax that's unrelated to the syntax of their spoken language" (Chiang 2002: 108). Dr. Banks speculates that "a noun is identified as subject or object based on the orientation of its logogram relative to that of the verb" (ibid.:109); in other words, the language has a grammar with two dimensions. This view of language implies very different world views, as it is exemplified by the story's main protagonist:

> When the ancestors of humans and heptapods first acquired the spark of consciousness, they both perceived the same physical world, but they parsed their perceptions differently; the worldviews that ultimately arose were the end result of that divergence. Humans had developed a sequential mode of awareness, while heptapods had developed a simultaneous mode of awareness. We experienced events in an order, and perceived their relationships as cause and effect. They experienced all events at once, and perceived a purpose underlying them all. A minimizing, maximizing purpose. (Chiang 2002: 134)

The language and the world view of the aliens is based on Fermat's 'principle of least time'. In physics, this is a variational principle according to which both the minimum and maximum paths of light can be described with one and the same mathematical equation. The simultaneous mode allows us to experience the past and the future at once; language is not used to convey information (since everything is already known), but it is *performative*: for knowledge to be true, it has to be actualized by expressing it in language (see Chiang 2002: 138). In the course of the interaction with the aliens, the protagonist, who is a field linguist employed for this specific assignment by the American government, learns the language of the aliens. Acquiring the written form of the aliens' language also allows the linguist, Dr. Banks, to see her future and to experience present, past, and future simultaneously.

6.1 The conception of time in "Story of Your Life"

When analysing the conception of time in the short story, it is crucial to distinguish between the different ways that time is managed in utterances. Expanding on a well-known distinction due to Hans Reichenbach (1947), Mey (2000: 54) identifies four different types of time in utterances, a distinction which can also be fruitfully applied to narratives: (a) speech time (ST), which is the time at which an utterance is spoken, (b) event time (ET): the time at which the event that was spoken about took place, (c) reference time (RT): the time "indicated by the temporal indicators of the utterance" (both verbal tense morphemes and adverbs of time) and (d) viewing time (VT) (or viewer time), i.e. "the point of time at which a 'viewer' contemplates the events referred to or described" (Mey 2000: 59).

The short story in question starts in the present tense and describes the scene when the main protagonist, Dr. Banks' daughter is conceived. This is also the point of time from which the story is written. The narrator, Dr. Banks, addresses her daughter in the second person, stating “I’d love to tell you the story of this evening, the night you’re conceived, but the right time to do that would be when you’re ready to have children of your own, and we’ll never get that chance” (Chiang 2002: 91).

Throughout the story, the protagonist relates events connected to the child’s growing up, up to and including her death as a young woman; she does this as a first person narrator, using the future tense and addresses her daughter, thus telling her the story she could never deliver to her in person. At the very beginning of this story, Dr. Banks already knows the outcome and merely relates how the events came about. Thus, the story is a first-person narrative in which “the figure experiences the events of the plot” (Stanzel 1971: 60) and becomes the narrator of the events. “As a rule the experiencing process is separated from the narrating process by a more or less clearly marked time span [which corresponds to the narrative distance of the authorial novel]” (Stanzel 1971: 61).

Whereas Dr. Banks’ interaction with the aliens is narrated in the past tense, any scenes and events referring to her daughter are rendered in future tense. The ending is again related in present tense and focuses on the day after the baby’s birth which is followed by the scene where the aliens leave; this event is again narrated in the past tense. In the final paragraph the story returns to the point of the daughter’s conception.

The story starts in the present tense, resorts to the past tense to narrate the events connected to the encounters with the aliens, and alternates between these two tenses to keep the different narrative levels apart. The passages in the present tense change towards the future when the protagonist refers to details and events of her daughter’s life. There is no chronological order to these ‘future memories’ as the daughter is addressed at varying points of her life. Typically, these scenes take the following form:

> I’ll remember a conversation we’ll have when you’re in your junior year of high school. (p. 107)
>
> You’ll be six when your father has a conference to attend in Hawaii, and we’ll accompany him. You’ll be so excited that you’ll make preparations for weeks beforehand… (p. 111)
>
> I remember your graduation. There will be the distraction of having Nelson [Dr. Banks’ new partner] and your father and what’s-her-name there all at the same time, but that will be minor. (p. 112)
>
> I remember once when we’ll be driving to the mall to buy some new clothes for you. You’ll be thirteen. (p. 114)
>
> It’ll be when you first learn to walk that I get daily demonstrations of the asymmetry in our relationship. (p. 119)

> I remember when you are fifteen, coming home after a weekend at your dad's, incredulous over the interrogation he'll have put you through regarding the boy you're currently dating. You'll sprawl on the sofa, recounting your dad's latest breach of common sense… (p. 121)

> 'Why?' you'll ask again. You'll be three. 'Because it's your bedtime,' I'll say again. (p. 130)

In the examples above, the event time is in the future. This contradicts with the phrase "I remember", which generally refers to past events in narratives and thus suggests that the reference time should be represented by a past form. Utterances such as "I remember once when we'll be driving to the mall to buy some new clothes for you. You'll be thirteen" (p. 114) clearly run counter to the temporal sequencing we usually expect; our linear conception of time sees time as an arrow (compare the saying 'time flies like an arrow'), hence we can only remember the past and not the future. However, the author of the story uses this device to express the new understanding of time which the protagonist has gained through her interacting with the aliens and by acquiring their written language, which reflects their conception of time as simultaneous rather than sequential.

In the story's movie adaptation with the title "Arrival" (2016), the different time levels are indicated by the visual technique of 'flash-forwards' to represent those aspects of the story which are related to the daughter's life. Linguistic expressions of time are not used in this connection at all. However, the viewer who does not know the story may not realize immediately that these are not flashbacks, but projections into the future.

Dr. Banks herself describes the effect of the aliens' written language, Heptapod B, on her mind and reflects on how she adapts to, and experiences both the heptapod and the human view of time, as follows:

> Even though I'm proficient with Heptapod B, I know I don't experience reality the way a heptapod does. My mind was cast in the mold of human, sequential languages, and no amount of immersion in an alien language can completely reshape it. My worldview is an amalgam of human and heptapod. (p. 140)
>
> …
>
> Usually, Heptapod B affects just my memory: my consciousness crawls along as it did before, a glowing sliver crawling forward in time, the difference being that the ash of memory lies ahead as well as behind: there is no real combustion. But occasionally I have glimpses when Heptapod B truly reigns, and I experience past and future all at once; my consciousness becomes a half-century ember burning outside time. I perceive – during those glimpses – that entire epoch as a simultaneity. It's a period encompassing the rest of my life, and the entirety of yours. (pp. 140–141)

Unlike electronic media, which are said to endanger the physical and mental capabilities of human beings, the mental capabilities of the protagonist of the story expand as a result of her interaction with the heptapods and their language. Acquiring Heptapod B, the written version of the aliens' language, enables Dr. Banks to adapt to, and adopt, their world view.

The author of the story quite obviously based his ideas on the linguistic relativity theory, as proposed by Sapir and Whorf, the strong version of which states that people's world view is determined by their language (Whorf 1956). Ted Chiang attempts to convey the concept of simultaneous time by his skilled use of reference time throughout the story. Events related to the interactions with the aliens are narrated in past tense, whereas present tense (in combination with other tenses) is employed when the narrator refers to her interactions with her family, yet she always uses future tense to tell the story of her daughter's life.

One might ask why the protagonist does not even consider altering the projected path into the future, knowing already at the time of her conception that her daughter will die as a young adult. At the end of the story, the protagonist merely says "from the beginning I knew my destination, and I chose my route accordingly" (Chiang 2002: 145), suggesting that this choice was predetermined and not subject to her free will. As the story's protagonist, she even elaborates on the question of free will in the context of simultaneous consciousness, arguing that knowing the future is incompatible with free will: "now that I know the future, I would never act contrary to that future, including telling others what I know: those who know the future don't talk about it." (p. 137). She even discusses the question of why the heptapods should be using language at all if they already knew everything that would be said. In this context, she explicitly mentions speech act theory, explaining that the heptapods' language use works along these lines, as expressed in Austin's (1962: 6) dictum: "the issuing of an utterance is the performance of an action". All language is performative for the heptapods, as they do not use language to inform (as they know everything already anyway) but to perform, to 'actualize': "in order for their knowledge to be true, the conversation would have to be actualized" (Chiang 2002: 138).

This view of the question of free will in a simultaneous mode of time recalls Stephen Hawking's deliberations on the question of whether the future can be changed in time travel. He proposed two solutions to the paradoxes posed by time travel, but neither of these solutions allow for a change of history: The first is the consistent history approach, which says that even if time travel were possible, everything that happens in time-space still had to be consistent with the laws of physics. This would mean you could not travel back in time "unless history showed that you had already arrived in the past", and while there, "had not […] committed any actions which would conflict with your situation in the present and would not be able to change recorded history" (Hawking 1996: 183).

The other solution is to have time travellers go back in history so they could enter alternative histories; as such histories had not been recorded, they would not have to be consistent with previous history. However, even if space-time is 'warped', in the sense that it is possible to travel into the past, a human still would have to remain in the same space-time and therefore in the same history (ibid.:184).

Travel into the past is allowed on a microscopic scale in Richard Feynman's sum-over-paths (or 'sum-over-histories') approach to quantum mechanics (Feynman 1999). Yet the question is whether quantum theory allows time travel on a macroscopic scale. If one argues it should, the chronology protection conjecture should be assumed to hold; as Hawking expresses it: "the laws of physics conspire to prevent *macroscopic* bodies from carrying information into the past" (2008: 185). In sum, the author of our short story appears to be very much aware of these paradoxes and the possible theoretical explanations offered for the problem of changing the future in time travel; he applies these to the story in the sense that he rules out free will on the part of the story's protagonist.

These considerations illustrate, as do many other issues discussed in the story, the great effort that Ted Chiang takes to base his short story on a number of scientific theories, like Fermat's principle of least time, Sapir-Whorf's linguistic relativity theory, and Austin's speech act theory, weaving them very skilfully together in his story. Thus, he opens up a fresh perspective on time and humans' adapting to it, even if this adaptability remains in the realm of science fiction.

7. Conclusion

Time and its perception have penetrated human beings' lives since the beginning, as we cannot live outside a temporal perspective. Accordingly, theories of time have been developed not only in various academic disciplines, but also in the form of the folk theories that have emerged among the peoples of the world.

The present chapter has discussed selected theories of time, in particular the most recent views on time developed in the natural sciences, the sociological conception of time by Norbert Elias, and the anthropological perspective provided by Edward T. Hall. In linguistics, the theory of conceptual metaphors has also focused on time and its metaphorical conception in Western societies.

The discussion of how new technologies have shaped different work patterns and conceptions of time and space throughout history, in particular since the onset of industrialisation, illustrates the adaptability of human beings, and how technological innovations have frequently met with criticism with respect to their effect on humans.

The analysis of the conception of time in the short story by Ted Chiang provides a science fiction backdrop against which to view the extreme adaptability of the human mind. Learning the aliens' language, as it reflects a simultaneous mode of time that allows them to see the present, past, and future all at once, equips the story's main protagonist with a similar ability. The consequences of knowing the future are then discussed on the basis of the explanations provided in the story itself, and against the background of (in this case, Stephen Hawking's) deliberations about the possibility of time travel.

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CHAPTER 4

The reality of technological worldviews

Time and space frames of reference in the world of self-driving cars

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There appears to be a silent shift in technological discourse, from adapting technology to people's needs to adapting people's needs to new technologies. This shift in 'direction-of-fit' is effected by spatio-temporal text-world builders. The analysis of a technological article on self-driving cars serves as an example of a discourse-space approach to identifying the fundamental coordinates of worldview construction, involving Space, Time and Attitude. Results allow a critical evaluation of a one-directional heuristic that suggests user benefits. However, the frame-of-reference and point-of-view mask the socio-political consequences of introducing self-driving cars. The analysis reveals the subjective ground of the argument and challenges a self-assertive, dehumanised positivist attitude to technological innovation. It is argued that the spatial nature of worldview construction directs towards desires and intentions for action.

Keywords: worldview, intentionality, technological discourse, discourse-space, time

1. Introduction

In the evolution of the human habitat, human adaptability has a proven record of existential success despite natural disasters, such as earthquakes, climate change and epidemics. However, the evolution of the species involves another level of existential challenges, namely, the socio-cultural human nature and innate intentionality to cooperate with fellow human beings. A major challenge to social well-being is how to ensure a strong and sustainable common sense of reality, or worldview, that is epistemically grounded in human perception of the natural world. Human agency and adaptability require natural-world grounding in order to experience the world with a deep sense of certainty that is derived from common knowledge and

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values, and organised in a set of shared heuristics that operate in the background of "practical reasoning" (Levinson 2000: 32–33).

Common ground is organised spatially on the premise of the primacy of spatial cognition. It functions to evaluate the known, to imagine alternatives, and to gauge their desirability from which shared intentions-for-action can unfold (Searle 2010: 42–45). Consequently, it enables people to adapt, to rebel or to keep things as they are. However, the trajectory of evaluative thought to intentions for action is not as straightforward in the social world as it is in the natural world, inasmuch as it relies on communication to establish common ground and to appreciate social facts. The analogy between the spatial organisation of the natural world and that of social worlds provides a sense of certainty; but it relies on internal 'truth' factors, rather than natural 'external' facts (which is not a bad thing, because it makes social worlds relative and adaptable). In language use, re-presentations can be formulated in a factual way by a declarative type of linguistic constructions (Searle's "declarations") that claim a truth-value that is in principle imaginary and non-factual. For example, a factual type of discourse will leave no clues for evaluation and dialogue about the desirability or necessity of events, since it is taken for granted that its destination is inevitable and external to human intervention. Building on linguistic theory of general processes that direct presumptions of meaning in socially normalised types of communication, such as speech acts and genres, it is logical to assume that there is parallel variation in culture-dependent heuristic types of coordination (Levinson 2000).

Cognitive theory holds that the epistemic grounding of human cognition is afforded by the "primacy of spatial cognition" and variation in "coordinate systems" in thought and language across cultures (Levinson 2003: 16). These coordinate systems allow visualisation schemas of complex relational networks. A culturally normalised coordinate system functions as an implicit heuristic to reduce complex issues and to make sense of them collectively. Levinson's extensive anthropological work shows that the spatial analogy between natural- and social-world construction in thought and language operates across cultures in a variety of coordinate systems: Intrinsic, Relative and Abstract time and space frames-of-reference (henceforth FoRs) and combinations thereof (Levinson 2003: 55). Moreover, experimental research of spatial brain activity shows that the mind is neurobiologically organised in such a way that spatial-cognitive patterns characterise types of cultural diversity (egocentric, allocentric, and/or 0-centric, Searle 2010).[1] As far as we know, spatial analogy is the premise of evaluative reasoning from which social worlds

1. See Chilton (2014, Chapter 11) for an up to date overview of neurocognitive, discourse and cognitive linguistic literature. See Teuscher et al. (2008) for an experiment of congruity effects in time and space perception.

can be understood, experienced, evaluated and adapted to fit (Searle 2010). Social worlds are, and need to be, set in a selectively delineated 'timespace' (May & Thrift 2001), for example, in the Netherlands at present or in the Netherlands during the Second World War. These timespaces, or chronotopes (Bakhtin 1981), function as cognitively and socially manageable index fields (Bühler's *Zeigfeld*, 2011). Theories dealing with the pragmatics of spatial cognition and intentional reasoning are based on the assumption that the organisation of the social world relies on general spatial coordinate systems. The analogue relationship between spatial perception, thought and language use provides for imaginary spaces that are epistemically grounded in natural space.

Assuming that spatial cognition is the overall organising principle of human consciousness (Hörnig et al. 2000) makes it a generic neurocognitive constant in a changing world. However, indexical markers of social cognition are subject to change through social interaction, in what Bauman (2007) describes as a 'liquid society', one that is always in motion. Social change can be slow, but over the past century, the Western world has witnessed a radical epistemic paradigm shift (Foucault 1965; Kuhn 1962), from natural-fact indexing to social-fact indexing in which social facts are the referents. In his *Theory of Language*, Bühler notes that the function of space and place has changed from stative anchors to directive pointers, "The index words in our linguistic intercourse are dead, but deixis itself is alive" (Bühler 1934: 145, translated in Innis 1982). The norm is no longer based on discrete anchors but rather on types of anchoring. This provides a reason to seek out variables of discourse deixis, as Chilton (2014) argues, and variation in FoRs and their internal directions-of-fit. To achieve this, the epistemic shift requires a constructionist way of investigating discourses as dynamic, symbolic fields – a view that is partly grounded in natural-world facts, and partly in social-world facts. The epistemic shift in space and time heuristics foregrounds the malleability of the world at the expense of the physical state of the world and potentially affects social experience fundamentally. For example, the development from tangible, visual mechanical industrialisation to virtual digitalisation has a substantial impact on everyday experience, identity and agency, even though these 'revolutions' have no external grounding. In the world of technological innovation and its intentionality to transcend geographic, demographic and political borders, the local grounding of culture has come adrift.

The discourse-space approach to text analysis for coordinate systems is discussed in terms of narrative direction, linguistic and socio-cognitive heuristic features of the analogy between natural- and social-world construction. How discourse-space analysis contributes to understanding and critiquing social realities is illustrated by the analysis of Knight's (2015) *MIT Technology Review* article about the American automobile industry's development of self-driving cars. The analysis, based on Chilton's Deictic Space Theory (2014), demonstrates how the spatial episteme of a text world and its intentional affordances can be detected at the conceptual level of Space and Time coordinate systems and Attitude (STA).

2. Discursive epistemes

The epistemic shift from natural-world facts to technological-world logic may explain the growing uncertainty about identity. It challenges the stability of traditional communities and their political organisation, as we see it in Western democracies. The concomitant backgrounding of the natural episteme – external to human agency – is the cause (or maybe the consequence?) of a weakening sense of identity and social cohesion. Modern societies are in search of a new episteme to deal with a loss of familiar epistemic anchors. Assuming that humans have a specific cultural DNA and "species-unique motivations for cooperation" (Tomasello 2009: xiii), the heuristic of our sense of 'reality' must either adapt to survive in the normalised 'liquidity' of society, or find an alternative heuristic. However, when cultural cohesion is threatened from the outside, cultures tend to turn inward, as we observe in the rise of nationalism in current US and European politics. We may conclude that the epistemic shift of the 20th and 21st centuries has political consequences that are reflected in the construction of discourse.

The spatial construction of a discourse functions to negotiate in and between epistemic communities and their shared values, so as to give them a sense of reality or durability (Latour 1990).[2] The spatial analogy between natural-world and social-world construction provides the scaffolding of a discourse world and provides a rich basis for comparative text and discourse analysis by revealing variation in worldview construction, visualising their evaluative patterns and discovering their effect on possible inferences.

From a critical discourse point of view (cf. Filardo Llamas et al. 2015 on evaluation in ideological discourse) an STA (Space, Time and Attitude) analysis of variation in evaluative patterns can reveal and challenge the logic behind intentions-for-action. This logic is a result of a ternary relationship between point-of-view, frame and direction-of-fit that affords the creation of false epistemes when collective paradigms are "mistakenly generalised" and objectified in factual, e.g. scientific, discourse (Kuhn 1962: 43). However, the distinction between natural facts and what Umberto Eco has labelled "hyperreality" (Eco 1990 [1975]) can

2. Cf. Latour's (1990) article "Technology is society made durable", and Searle's (2010: 17) argument that social artifacts are only as true and valuable as people believe them to be; they are basically "intentionality relative", rather than factual.

be demystified, because, like all reasoning, the discourse of hyperreality must be grounded in the factuality of natural space and external time to make sense. For example, Eco observes that in American culture,

> … the American imagination demands the real thing and, to attain it, must fabricate the absolute fake; where the boundaries between game and illusion are blurred, the art museum is contaminated by the freak show, and falsehood is enjoyed in a situation of "fullness", of *horror vacui*. (Eco 1990: 8)

The American imagination creates "reassurance through imitation", the metaphysical dichotomy between good and evil, and "cathedrals of ironic reassurance" (ibid. 57–58). Eco's observations can easily be mapped onto the 2016 campaign of the then US President Elect, Donald Trump, where non-factual spaces have become anchors to serve as the episteme for their internal-realities, making it seem possible to "Make America great again". As Wittgenstein observed: "*Wir machen uns Bilder der Tatsachen*" (1922, *Tractatus* 1.2), that is, "We make pictures of the facts". However, if the imaginary "cathedrals" presuppose their own epistemic ground, it becomes problematic to evaluate or challenge their internal logical coherence, or "fit".

The increasing reality factor of non-factual, abstract space and time perception calls for a critical research agenda to unmask self-assertions and to question the rationale of the 'how and why' of social 'facts'. If we consider language use as a conduit between thought, experience and collective intentions for actions, discourse-space analysis can be applied to determine possible intentionalities that are afforded by a text's spatial coordinate system. The premise is that a discourse can be identified by the logic of a common coordinate system that shapes its worldview. The proposed discourse-space approach therefore focuses on variation in the presumptive nature of discourse that governs (affords and restricts) possible meanings and their intentionality.

3. The self-fulfilling prophecy of some discourse worlds over others

The contemporary dynamic rationale of economic growth and its alliance with technological innovation are examples of Eco's hyperreality. Both have an internal sense of reality that is self-perpetuating and hegemonic in Western democracies whose power has come to rely on standards of economic growth beyond their borders. This estrangement from natural facts and basic human needs is illustrated by what Joris Karl Huysmans describes in his novel *Against Nature* (1884), in which the eccentric character, the Duke Jean des Esseintes, searches for an illusive, objective ideal of artificiality. Shaking off preconceived ideals in his passion for novelty, he completely disregards the simple, natural aspects of life, including human sensibility. Similarly, current transformations caused by globalisation and economic or finance-driven ideology have affected the social landscape rapidly. Consequently, technological and cultural worlds are dissonant as technology leaves no space for adaptation – at least not for everybody. The question arises as to who or what is in charge and can be held accountable. Moreover, globalisation and technology have created virtual communities that do not require natural-space grounding, while they do have social agency. These communities and institutions supersede national accountability, as exemplified by the power of global financial institutions that challenges democracy.[3] It appears that natural (geographic) spatial grounding has lost its truth-value. These dissonant power structures push and pull in opposite directions: either society adapts to serve the economy or the economy adapts to serve society. Established societies are adrift, and, as Gramsci predicted, discursive "position wars" and silent "passive revolutions" (Ives 2004: 109f) go hand in hand with frustration, fear and violence. The spatial analogy between natural facts and non-factual hyperrealities fails to provide a durable epistemic ground when they are built on nonfactual realities. As Huysmans pointed out, this goes 'against nature' and puts human adaptability under pressure, while it is unclear who (or what) controls innovation and agency, with what intentions, and who is responsible.

To most people, social, economic and technological evolutions may seem to be as unmanageable by humans as biological evolution. Effectively, however, social organisation is a product of human interaction, empathy and volition. It creates a space in which people have choices and agency, rights and responsibilities. In Searle's (2010) central argument, the legitimacy of social worlds relies on a collective volition to accept the illocutionary nature of communication that shapes a society's knowledge and values. Searle (2010: 142) also proposes that non-factuality is ultimately unsustainable because it relies on unstable, desire-dependent motives and the power position of its beneficiaries. A social system, if it is to be sustainable, ultimately requires grounding in a general episteme of natural facts as well as a common episteme of social facts and values that foster volition and cooperation. Awareness of spatial cognition as a general human condition leads to awareness of variation in the spatial grounding of political and other discourse domains as a marker of social and intentional diversity.

3. As described, for instance, in Luyendijk's (2007) anthropological report on London City as a world apart, an airplane without a pilot.

4. The spatial ground for sense making in thought, language, discourse and society

Text and discourse worlds are constructed at different levels of abstraction that complement each other in their coordinate system: the meanings of linguistic and other verbal, symbolic relational constructions are governed by culture-driven narrative paths and their spatio-temporal organisation. Starting out from the bigger picture of social organisation, the relationship between human adaptability and scientific and technological discourse has been given ample attention in the philosophy of evolving spatial cognition and its complexity (e.g., Ellul 1954; Soule 1956; Kuhn 1962).[4] In social science, discursive FoRs are analysed conceptually, for example in Lyotard's (1984) "myth" of language that becomes meaningful through oblique causality patterns, or Gramsci's observation of the political consequences of "hegemony" of normalised language use. By contrast, Laclau and Mouffe's (1985) "floating signifiers" are ambiguous indeterminates that need a context to have meaning; i.e. they refer to 'something' going on in the background that directs meaning construction in a search space that is presumed by a higher-level construction, such as metaphor and metonymy, narrative and text- and discourse-world construction. In all of this, coordination must be established across levels of meaning construction in social contexts, including linguistic, narrative, metaphor, and text- and discourse-analytic approaches that cluster explicit tokens into types of meaning constructors.

Text- and discourse-world approaches operate at multiple levels of meaning construction that frame and direct meaning in self-contained ontologies. In text-worlds, the narrative concepts of Western politics, as well as of technological innovation, point towards future projections (Dunmire 2011) from which sets of possible intentions for action unfold. The analogue structures of shared knowledge and possible futures provide an epistemic ground for non-factual future projections. Future projections are grounded in knowledge of the here/now FoR and contained in an external attention frame. Both frames are governed by a cultural coordinate system that directs the narrative path from known present to a likely future. However, because the future is unknown, its presentation must involve a selective compression to limit the number of possible entailments. The narrative structure of a chronologically organised text directs towards the future and relies on positive intentionality for a "better future" (Heywood 2007: 11–12). Herman (2003) addresses cognitive-narrative affordances of entailment as the progressive

4. Intertwining sociological analysis with theological discussion, Jacques Ellul (1985) examines how reality (which is visual) has superseded truth (which is verbal) in modern times, leading to the devaluation of the word [as a tool for understanding the world].

objectification and compression of complex, ambiguous processes. These studies address the subjectivity of power in declarative and presuppositional speech acts that support internal coherence. Linguistic discourse analysis mainly addresses the micro-level of verbal aspects of declarative expressions and their presumptive nature. From a pragmatic point of view, Searle (2010: 11) points out that "all institutional facts […] are created by speech acts", that is, by virtue of the illocutionary force of declarations and their implicit deontic powers (Searle 2010: 6). The challenge of discourse-space analysis is therefore to reveal cohesive patterns that connect the linguistic level of meaning construction with the social, heuristic level of making sense and to putting worldviews into practice.

Chilton's linguistic Discourse-Space Theory (Chilton 2004, 2013) and Levinson's empirical findings in cultural diversity (Levinson 2003) address the general coordinating and directive function of spatial and temporal coordinates as the anchors of imaginary object relations and event structures, while relativising them and taking stance that emerges from socio-cognitive spatial patterns. At the linguistic level, Biber and Gray (2013: 27) take a syntactic-semantic approach and provide historical discourse evidence of a trend towards the nominalisation of verb phrases in scientific discourse, changing formal grammatical complexity into domain-specific phrasal complexity. Example (1) shows how a sentence compresses complexity to the degree that a non-specialist will have trouble understanding it.

(1) "Glass crack growth rate is associated with applied stress magnitude" (2013: 2)

The lack of elaboration in this sentence raises syntactic-semantic uncertainty about its parts of speech, as well as fundamental relational and causal questions about *who, what, where, when*; in addition, it leaves the reader in the dark as to the *how* and *why* that appear to be presupposed or not relevant. In this way, nominalisation of processes masks agency, which is in principle ideological (Kress & Hodge 1979, Chapter 2). The intended interpretation of the sentence's possible intentional entailments requires insider knowledge. Biber and Gray's (2013: 106) diachronic analysis of linguistic markers in scientific, academic and spoken language is relevant to discourse-world construction, as it marks shifts in epistemic grounding. The observation of linguistic shifts in these domains goes beyond the sentence level as it deals with a stylistic, declarative speech-act feature at the text level. Likewise, Biber and Gray (2010) find that academic writing is not per se grammatically more complex or more elaborate; rather, it is a more 'compressed' style with modifiers and verbs that are embedded in noun phrases, making linguistic constructions less explicit but nevertheless meaningful to the expert.

All these structures combined reduce the sets of possible meanings by fitting them in the context of a discourse frame, while their coordinate system reflects the dialogical relationship between language and society in "a set of shared heuristics that are wildly underspecified trading assumptions of what is normal" (Levinson 2000: 32–33).

4.1 Spatial cognition and the analogy between natural world perception and abstract world construction

Discourse analysis for linguistic features has the advantage of presenting explicit verbal evidence and dealing with familiar lexical-semantic and syntactic form and function relations. However, words and their meaning are not enough to make sense of complex issues: lexis alone does not unmask the directive and pragmatic nature of language use. Making sense collectively for cooperation requires common knowledge and values that emerge from the discourse and normalised social practice that make a community a community. The broader levels of meaning construction are embedded in social/institutional cultures, discourse domains and modes of communication. Discourse-world analysis of variation in spatial coordinate systems involves:

– *Layers of meaning construction* organised in space and time FoRs (attention spaces);
– *Attitude and intentionality* (Duranti 2015) in perception, beliefs and values that are expressed in speech acts with illocutionary directions of fit (Searle 2010);
– *Force dynamics* (Croft and Cruse 2004: 46) *and directions-of-fit*: world-to-word (desires and intentions) and word-to-world direction (beliefs and perceptions), or 0-direction (imagination) (cf. Searle 2010: 15);
– *Discourse* that is constituted by, and constitutive of, social interaction (Fairclough & Wodak 1997: 258).

Adapting to a paradigm shift that is imposed from outside a community – such as by technological and scientific shifts – requires time to evaluate, test and adopt its episteme. It involves navigating around different points of view and stretching and reducing the FoRs, in order to see whether the episteme aligns with the known world and to estimate possible consequences. With discourse-space analysis, patterns of reasoning can be detected to identify conservative attitudes and the positivist direction of technological discourse that pushes innovation faster than the human mind can handle (cf. Roderick 2016, Chapter 4).

From the middle of the nineteenth century, technological innovation has affected human existence at an ever-increasing pace: our sense of time and space, our role in life, our geographic and social scope and sense of belonging, etc., have all been compromised. The rate of technological innovation puts a high demand on the evolutionary principle of human adaptability and this reflects in instability between cultures and their discourses, as Gramsci noted in his *Prison Notebooks* (1971; cf. Ives 2004). From the Industrial Revolution on, technological discourse has become entrenched in everyday life in many parts of the world. Technology propagates efficiency, puts pressure on the rate of change, and injects societies with the negative stimulus of 'innovate-or-perish' in a fierce market competition with an intrinsic-relative perspective. Everyday exposure to this 'reality' affects the mind, the sensory-motor system and natural intuition; it puts pressure on people's agency in adapting and results in self-protective communities, nationalism and exclusion, as we see in Western democracies. There is no room (time nor space) for nuanced existential questions, for example, whether or not we should accept this 'hyperreality' of robotised production systems and automated self-services at the expense of thousands of jobs and people's autonomous sense of identity.

The new reality of technological progress echoes through many core domains of social practice, such as the economy, management, politics and education. Moreover, the normalisation of the episteme of technological discourse presumes its own factuality of power status and agency. The presupposed and therefore 'tacit' presence of technological discourse at all levels of daily life makes it difficult to identify the premises that cause social instability and to challenge them. For example, a company like Starbucks (with its capital) is welcome in The Netherlands at a preferential tax rate, whereas providing humanitarian aid for refugees is a political problem. The yardsticks of the financial world (capital and growth) appear to be applied indiscriminately to two very different domains (the economy vs. human rights), with opposite intentions for action. Apparently, the financial world has no need to claim its status function, whereas refugees do. This raises serious ethical questions about accountability: Who is responsible, e.g. for people caught in war zones, pollution and climate change? Who is accountable for inequality when technological advancements are only accessible to the wealthy, while the economically poor in Africa and South-East Asia are cleaning up the mess? And who will take responsibility for turning the tide?

To get a grip on how technological discourse affects worldview construction, technology is regarded as a specific culture that is part of a broader social culture. Each culture interacts with the other (Roderick 2016: 2), but here we focus on one discourse domain and its interaction with other discourses. As discussed above, the discourse-space approach focuses on the coordinate system that governs the text's socio-cognitive heuristic model. The selected sample text is taken from the US-based *MIT Technology Review*. However, the global impact of technological discourse makes it very powerful as it transcends local, national and regional geo-cultures. The next section will explain the analytic model (originally designed for the analysis of Dutch political texts [Kaal 2017], adapted to apply to US technological discourse).

5. A model for STA text-world analysis: Politics and technology

An analytic discourse-space model (Kaal 2012, 2015) is applied to spatial aspects of the discourse of ‘innovation’ in Silicon Valley’s development of automotive technology. The approach seeks evidence of dissonance or consonance between technological innovation, social stability and human adaptability. Two critical questions were asked in the investigation of the analogical relationship between the natural world and the technological discourse world: (1) *How* do technology-driven presumptions affect modern worldviews and (2) *Who* are the stakeholders?

The STA analytic model starts out from the premise that Space, Time and Attitude direct intentionality. Space and time coordinates are the anchors of attitude and intentionality. Their force-direction is regulated by attitude, expressed in (1) a scale of deontic words and phrases, (2) conceptual force directions of proximity and distance to the deictic centre, (3) the scope of the attention field. To exemplify the relationship between STA and intentions for action, an example is given from a previous STA study of political discourse (Kaal 2017). In Example (2), the Dutch Party for Freedom (PVV) makes claims about the resident Islamic population to express its negative stance on immigration and Islam:

> (2) In practice this means that there is more and more Islam, more and more headscarves, more and more crime, poverty, social-benefit dependency and medieval ideas. A people who govern their own country will decide who is welcome and who is not. But we, the Dutch people, watch the influx grow by the day. (PVV manifesto 2012: 11; *translation mine*)

Here, the party claims that Islam is a remnant of the Middle Ages (“medieval ideas”) that intrudes into modern Dutch society with a highly undesirable life style (negative connotations of invasive “more and more”, and undesirable “crime”, “poverty”, “dependency”). The distance between “medieval” and the present amplifies the party’s negative attitude to Islam’s presence in The Netherlands by framing it as an exotic chronotope. The scope of attention juxtaposes two spaces: the national here and now against the Islamic there and then. The juxtaposition suggests that the immediate index field of the here/now (‘our country’ and ‘the Dutch people’) is threatened. The suggestive insider-outsider timespace distinction and the invasive suggestion of “more and more” reinforce a sense of urgency: a need to take action now. The example gives an idea of how force-direction creates attitude by juxtaposing spaces and, in this example, supporting a negative evaluation of Islam in general, and particularly in “our country”.

Attitude in the STA model relates to space and time anchors and is rated by its force-directions-of-fit on a positive (+) / negative (–) scale of linguistic markers of degrees of certainty, belief and desirability (after Chilton 2005: 89; Werth 1999).

Time and space directions-of-fit and proximity-distance to the deictic centre of the here and now affect the force of attitude. The scalar model shown in Figure 1 is used to identify the ternary nature of the text world: its layered scope of attention and location of point of view, while attitude regulates the force direction of space and time (Kaal 2017).

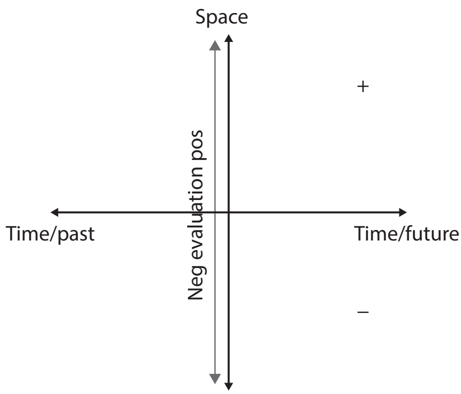


Figure 1. Space and Time × Attitude model (Kaal 2017, Chapter 7, Figure 7.2)

The annotation of Space, Time and Attitude markers is based on the following premises:

Space
Real space (Concrete-C): geographic references.
Abstract space (Abstract-A): Imaginary frames; mental spaces; social and institutional spaces.
Space provides an epistemic (real space) grounding and FoR. Due to its cognitive primacy, the epistemic effect of spatial grounding is high, whether concrete or abstract.

Time and temporality
Time has no cognitive primacy because there is no sensory-motor perception of time (Evans 2013: 403). However, a secondary 'reality' is represented by cultural aspects of perceived and experienced time, which function as relatively 'real', even though it is abstract.
Real time refers to external timetables and rhythms (seasons, day/night, the calendar); even so, the factual reality of time remains questionable (McTaggart 1908).
Abstract time and temporality present a text-internal common sense of how the world ticks. Technological timetables are factual in a technological worldview and hence they are abstract.

Time provides a biological, cultural and experiential episteme. Whereas temporality adds a narrative sequentiality and a measure of a sense of duration, a quality of transience, and urgency. The sense of time constituted in texts presumes its intrinsic understanding of time. The notion of *timespace* conflates space and time; it assumes the higher epistemic grounding of space in time and temporality in a space. This *ontological* timespace (May & Thrift 2001) possesses a powerful epistemic quality that triggers both factual (stative) and experiential (dynamic) reactions. It provides a compressed phenomenological sense of text-world reality by relying on underspecified directive presumptions.

Attitude is annotated on a positive-negative scale of deontic words and phrases, depending on the text at hand. Chilton's deontic scale (2005: 89; based on Werth 1999) was adapted to the type of text and applied to calibrate the force of attitude in relation to space and time referents. Attitude markers give direction to the intentionality from which possible intentions for actions unfold in the present context.

The basic characteristics of the article by Will Knight: 'Rebooting the Automobile' (*MIT Technology Review 118*/4, July/August 2015) are the following:

Genre: Journalism/Report.

Audience: Experts and people interested in automotive technology (including possible investors).

Anchors: Concrete and abstract references to Space and Time, Attitude, and experiential domains.

Spaces: The car, people/companies developing car technology, other industries in California.

Time: Past (30 years ago), Near past, Present, Near Future, Future.

Temporal narrative direction: sequentiality of past-present-future referents.

Meta-textual Narrator: The journalist on his car journey through California's technological world.

Text-internal Narrators: Automotive and other Californian Industries; development labs, cars.

6. Rebooting the automobile

Because spatial orientation is fundamental to human cognition, the principles of STA analysis can be adapted to other discourse domains such as technological discourse (as in the present article with regard to the development of self-driving cars). The annotations identify space and time FoRs and force-directions of fit. Concrete (C) and Abstract (A) space and time references were teased apart so as to show their epistemic grounding in geographic space and external time or in abstract space and internal time.

A first reading of the article yielded its analytical characteristics, as shown below. However, deontic words did not show much variation in their force of attitude, so they were simply annotated as positive or negative. In the article, the author switches from his personal perspective (his journey through California) to that of the local automobile industry and other (successful) supportive enterprises. For this reason, a distinction was made between the natural world (the here and now of the narrator) and the technological world/automobile industry, including the central space in which the article is set, California (CA). The annotated text segments are given in Table 1.

Table 1. STA analysis of W. Knight (2015), Rebooting the Automobile, *MIT Technology Review 118*(4), pp. 54–58

Text segments	Space	Time	Att.	Domain
Silicon Valley, racing	A CA	A Pres-Near Future	0	Other Industry
in a Hyundai Sonata (modern)	A	A Future	0	car
iPhone	A		0	car
Driver seat (fiddling)	C here		Neg	car
Rental car	A here	A Near Past	0	car
San Francisco Airport	C CA	A Near Past	0	External space
VW Jetta	A	A Near Past	0	car
Drove around	A here	C Near Past	Neg	car/mobility
Under the passenger seat	C here	A Near Past	Neg	car
in another Hyundai Sonata	A here	A Near Past	Pos	car
Directions to Starbucks	C direction	A Near Past	Pos	Other Industry
leaving his office	C direction	A Near Past	0	External space
to the airport	C direction	A Present	Pos	External space
in the automobile	A here	A Present	Pos	car
Self-driving cars	A here	A Present	Pos	car
California (cars cruising around in)	C CA	A Present	Pos	place/car
On the verge of its (cars') biggest invention		A Pres-Near Future	Pos	temporal/car

Table 1. (*continued*)

Text segments	Space	Time	Att.	Domain
in the late 1970s		C Far past	Pos	External time
in the 1980s		C Past	Pos	External time
1982 Year		C Past	Pos	External time
Advancement now		A Pres	Pos	Car industry
Remotely (deictic distance from car)	C here		0	car
car manufacturer 10 min North of Google office	C here/CA	A Timespace	Pos	Car industry *r* Other industry
Car manufacturer In Palo Alto near Skype and HP in January	C CA	C Near Past	Pos	Car industry *r* Other industry
a typical start-up place, hope	A	A Pres-Near Future	Pos	car
in 2010		C Near past	0	External time
ratings in Consumer Reports 2010	A	C Near past	0	Other Industry
Sync3 can connect to a home wifi network	A	A Pres	Pos	Other industry
Silicon Valley attitudes/wants to	A CA	A Future	Pos	Other industry
into the automotive industry	A	A Future	0	car industry
Ford has been ahead	A	A Past-Pres	Pos	car industry
In February		C Pres	Pos	External time
You need super computing in the car	A	A Future desire	Pos	car
at Nvidia	A CA		Pos	Other Industry
Stanford Univ. Dynamic Design lab space	A CA		Pos	Other Industry
Berkeley (University)	A CA		Pos	Other Industry
to the lab from his office	C direction	A Pres	0	External place
Inside the lab	C position	A Pres	0	External place
Park themselves relative to car	C position	A Pres	Pos	car
stay in lane (relative to car)	C position	A Pres	Pos	car
safe distance (relative to other cars)	C position	A Pres	Pos	car
on highways for long periods (relative to car)	A position	A deictic duration	Pos	car
This car is a platform space	A	A Pres	Pos	car
Silicon Valley car maker is transformational and aggressive	A CA	A Pres	Pos	Car industry

Legend: A = Abstract space/time; C = Concrete space/time; CA is California.

Table 2 (*Domains*) quantifies the external and internal spatial domains mentioned in the article, and their frequency of occurrence relative to the total N. The salient domain is the car (19/44). In the introductory paragraphs, the article focuses on the current type of car being used and the journalist's experience as he uses the car on his journey through California. The story progresses to the car industry and the car as an object of innovation; in the final paragraphs, the author describes the cars of the future that automatically "stay in lane", "keep a safe distance", and so on, that will emerge from present innovations.

Table 2. Domains

Car	19
Car Industry	5
Other Industry	8
Car and Other Industry	2
External Space	5
External Time	7
Total	**44**

In Table 3 (*Spaces*), the weight is on the *abstract space* (34/50) that reflects the internal space of the automobile industry and its users. Second is the *position* of the driver's car, and that of the car industry in relation to other industries. In addition, there are abstract spaces ranging from the driver's car, the spatial origin of objects he uses (iPhone, Hyundai, VW Jetta) as well as unspecified, presupposed abstract spaces, e.g. the automobile industry in general. Concrete space and time (external, see Table 4) describe the author's travel from one industry to another and their relative distances.

Table 3. Spaces

Space	Abstract	Concrete	Total
Here	5	3	8
CA	6	4	10
Position	13	4	17
Direction	0	5	5
Other	10	0	10
Total	**34**	**16**	**50**

In Table 4 (*Time*), the weight is on the extended present: near past to present to near future (A = 24; C = 5). The future is hardly mentioned, but presupposed as the outcome of present innovations. In the final paragraphs, the article makes it appear as if the future is already here, by including the future in the developmental present.

Table 4. Time

Time	Abstract	Concrete	Total
Past	0	3	3
Nr Past	7	4	11
Past-Pres	1	0	1
Now	13	1	14
Pres-Ft	3	0	3
Future	4	0	4
Temporal	2	1	3
Total	**30**	**9**	**39**

In Table 5 (*Attitude*), the weight of space and time is clearly on positive attitude (47 positive against 5 negative). Negative attribution occurs only in the beginning of the article and refers to space as experienced by the driver of the car in the past/present, suggesting that the current car design is not ideal (driver is "fiddling with driver seats" and "fumbling with the passenger seat"). By contrast, the author's attitude is positive in the final paragraphs about having everything at your fingertips on a touch screen, thanks to "transformational and aggressive" Silicon Valley technology. Force, rather than volition, is expressed in "you need super computing cars".

Table 5. Attitude

	Positive	Neutral	Negative
Time	22	11	2
Space	25	12	3
Total	**47**	**23**	**5**

7. A technological perspective on the self-driving car

With regard to the self-driving car's autonomous agency in the *MIT Technology Review* article, the question is whether the narrative is directed by fact, by convention of technological positivism, by wishful thinking, or by design. As to the space domains, it was expected that key domains include the automobile industry, cars in general (old and new), Silicon Valley as the centre of innovation for the car industry, as well as for other innovative industries in the region. These attention domains are represented in Figure 2.

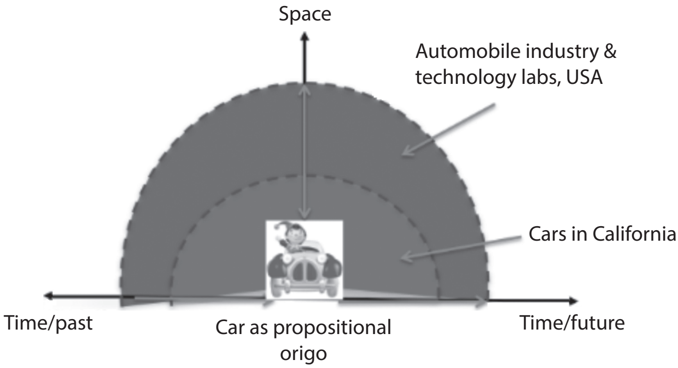
Key concepts in the reporter's present are:

- Space: The car, Companies/labs in car technology, Other industries in California
- Time: Past (30 years), Near Past, Present, Near Future, Future

- Actors (often nominalised as spaces): (People in) Industries, Apple, Google, Development labs, Cars
- Direction of temporal narrative: (1) Future; (2) Near Past; (3) Past; (4) Present; (5) Projected future as imagined in the reporter's Present (= Real time).

STA attention fields in Time and Space are likewise shown in Figure 2:

> Level 1. Centre: Cars and the car industry in Silicon Valley
> in the present of the narrator's journey;
> Level 2. The automobile industry in the past and now;
> Level 3. The positive present and future of technological innovation
> and the industry of self-driving cars.



Space, Time and Attitude in 'Rebooting the Automobile'
(MIT Technology Review 2015, 118(4): 54–59).
Past is negative; Present and Future are positive.

Figure 2. Worldview from the point of view of the US car industry

If we assign a scale of positive, zero, and negative stances to Space, Time and Spacetime, the following directions are indicative of their intentionality. The space frames represent a positive attitude to the future of car development in California and the technological industry in Silicon Valley. The time frame shows a one-directional path: from negative past experience with cars to a positive future for the car industry. Furthermore, while the overall timespace presents a negative past-present car world (state of affairs), in both the concrete space of Silicon Valley and in the abstract space of the automobile industry, a positive future for automotive development is projected. The direction of the time-path runs towards a positive future that contrasts both with a negative past/present and with an (even) better future in which self-driving cars provide positive features such as self-parking, reliability, safety, and long distance suitability. Last but not least, the circularity of the story in which the agent is the Silicon Valley carmaker and his transformational and aggressive attitude fulfils its own prophecy, namely that self-driving cars are the answer to past and present discomfort and lack of safety. The story thus builds up a self-asserting future-oriented hyperreality.

A consequence of the focus on technological innovation masks its human desirability which is presupposed by "the race" "to bring safer and more useful smartphone-style interfaces to cars" (Knight 2015: 54). The main agents are the industry and the high-tech labs, while there is no justification of an actual need for self-driving cars. In this world of technological innovation and industrial success, references to concrete space and place refer to the success of the industry, not to people or actual places (California and Silicon Valley). They metonymically refer to the home of innovation while de-personalising the focus of attention: objects are actors and people are objects who undergo innovation. Time is measured in relation to progress; the agents are the industries and their future products, while unhappy car users are portrayed in the present, or as future beneficiaries of the new technology. There is no reflection on what adaptations are required to pave the way for these future cars and how people will have to adapt in order to live with them.

In this example, the focus is on text-world construction; however, a multimodal approach would yield further evidence of worldview construction. For example, the visual dimension in this article should be taken into account for its co-constructive function in building a positive attitude (see Figure 3).[5]

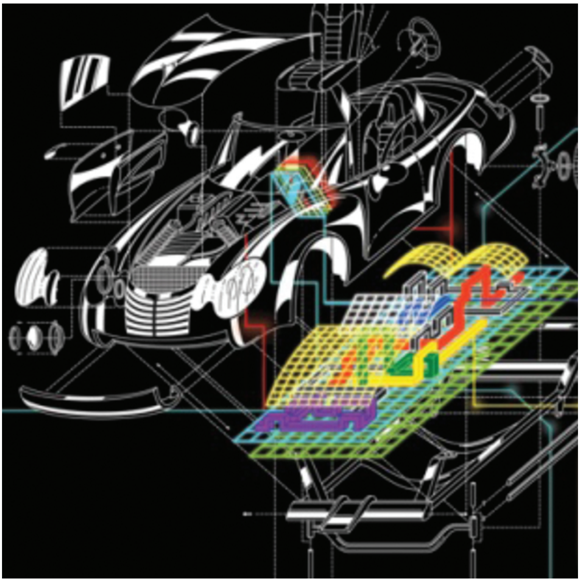


Figure 3. Spread-sheet illustration from 'Rebooting the Automobile' (*MIT Technology Review* 118: 54–55)

5. Cf. Roderick (2016) on the multimodal analysis of technological discourse.

Another illustration in the same article shows progress on a "timeline of automobile computerization" from 1966 to 2013. The progression starts with "radio relay stations" (1966), standard built in car-performance data readers (1996) and ends with the 2013 Tesla S model and its "17-inch touch screen, wireless connectivity and over-the-air upgrades" (Knight 2015: 57). This progressive timeline follows and co-constructs the timeline in the text and presto, with the development of the Tesla S, cars are presumed to be as adaptable as are people! The text and the illustration of the timeline align, and provide a narrative perspective on the car industry as heading in the direction of a predetermined genesis of factuality, in accordance with its own, internal episteme. In this way it constructs an intentionality.

The intentional aspect of the analysis presented here can perhaps best be described in terms of Roderick's (2016) classification of the four predominant discourse types on technology. Apart from being relative/intrinsic, the text is characterised by positivism, determinism, fetishism (over-valuation), and juxtaposition between observed past/present dissatisfaction and presumed future satisfaction. Each of these categories affect the text's intentionality and potential consequences: progress refers to a positive connotation of 'improvement'; determinism refers to the non-factual episteme that holds the story together; fetishism refers to unspecified belief and desire; and the juxtaposition of satisfaction and dissatisfaction enforces the desirability factor, as it does in the political example (Example 2). In this way, both knowledge and sentiment are addressed in the analysis. Its positive future projections are directed by the force of the (dis)satisfaction juxtaposition and fetishism, as well as by a deterministic sense of intrinsic evolution. The temporal path, illustrated by the timeline of the article discussed above, represents a positivistic, narrative intentionality that consistently presupposes "a better future". The question remains for whom that future will be better: for the car industry, for self-driving cars, for people, the country?[6] The worldview of this article truly transforms facts into an image, as Wittgenstein put it (*Tractatus* 2.1). It turns imaginations into semi-facts that carry an intentionality that directs towards a self-explanatory need for self-driving cars. As shown in the article, the concrete anchors align with the abstract, autonomous coordinate system of STA in a single direction-of-fit: towards a "better future".

6. Cf. Heywood's (2007: 11–12) political narrative structure: from the known past/present to a model of a desired future, together warranting actions towards that desired future.

8. Conclusion

The sample text analysis presented here, using STA frames and force directions, provides a glimpse of the heuristic grounding of modern technological innovation and its presumed natural episteme. The assumption that technological innovation equals growth and progress is a nonfactual projection which is far removed from the natural episteme of basic facts. Nevertheless, it is ontologically presented as an irreversible, as well as desirable, reality. The underlying principle of the transition from external, physical reality to the abstract reality of the human imagination anticipates future projections to be built in an analogical cognitive relationship between on the one hand, perception, cognition, and language use; and on the other, the communication, evaluation and negotiation of ontological meaning. At the macro level, this false epistemic projection is strengthened by its alliance with the mantra of globalisation and economic growth in various parallel mainstream discourses. The style of the article does not leave any room for questioning, or deliberating on, the complexity of the introduction of self-driving cars: Who will benefit? What is the environmental cost and who will pay to adapt the entire highway infrastructure? Do people want self-driving cars, given the satisfaction of autonomy while driving? How much time would people need to adapt, and is such an adaptation a good thing in terms of resilience, learning, intuition and creativity that are essential to the survival of the species? The shift, as outlined above, from external to internal episteme presents challenges with regard to human adaptability and cultural diversity from the inside; moreover, it challenges social and political stability. Such awareness of the non-factual discursive premises that inspire technological innovation will be helpful in generating a critique of its inherent, self-asserting realism, and in the end may inspire an alternative worldview in which technology needs to adapt to humans, rather than the other way round.

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SECTION II

Adapting text and textuality

CHAPTER 5

Ad-appting children's stories

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This chapter studies the multimedia adaptation of a classic children's story, Dr Seuss' *The Cat in the Hat.* Mixing story-telling with instructional instrumentality and lacking an interactive relationship with the story-teller, the story loses the 'enchantment' which, Bettelheim has argued, makes story-telling fundamental in the child's development.

Keywords: adaptation, enchantment, multimedia, orality, story-telling

1. Introduction

In this chapter I explore the adaptation of children's stories to the new medium of the digital children's book app. Digital writing technologies have often been seen as 'digitizing' existing cultural artefacts without affecting their meaning and function – the word processor as simply an enhanced typewriter which does not affect the nature of writing; the e-book as simply a more convenient way of carrying books around; the mobile phone as simply a combination of already existing media. But this is not the case. Each new medium changes what language is and what writing is. Even writing itself was not a matter of 'writing down' the spoken word – it decontextualized it and deprived it of its rich multimodality, while at the same time facilitating more intense introspection and individuality and greater linguistic precision (Ong 2002). The new digital media are no exception. The software we use to write, to interact with our friends, to tell stories, to shop, to do our work, has a built in knowledge of *how* we should do all these things – how we should write, how we should interact with our friends, how we should tell stories, how we should shop and how we should do our work – a built in knowledge that leads to remarkably homogeneous practices despite the apparent increase in choice.

This has been previously studied, for instance, in relation to PowerPoint (Zhao et al. 2014), which favours the list over other textual structures such as narratives or extended arguments (Djonov & Van Leeuwen 2014), and works with textual units

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that have a limited capacity (6 lines of text per slide, 6 words per line, according to the Harvard University's Instructional Computing Facility; cf. Tufte 2006: 23). It has also been studied in relation to Microsoft SmartArt (Kvåle 2016) whose hundreds of diagram templates are mostly based on corporate organization charts, and unilaterally abolish, for instance, certain traditional academic types of diagram. And it has also been studied in relation to 'first person shooter' computer games, where it is again the technology rather than its use that prescribes how the game will unfold (selecting a 'mission', selecting equipment, setting out to achieve the mission, and battling the obstacles) regardless of whether the game is product by the American company Novalogic or by Hezbollah (Machin & Van Leeuwen 2007). As Machin and Van Leeuwen conclude, "this format is not a neutral container for diverse and local content"; it raises the question of whether there will be "a future in which (…) the shooting gallery will become the dominant, the only and inescapable model of conflict resolution" (ibid: 100).

The same applies to digital children's books apps. Oceanhouse Media Inc, the company which publishes the app I will discuss in detail later in this chapter, has adapted a wide and diverse range of classic children's stories, but uses the same underlying software for all of them: a small, standardized set of touch screen gestures such as swiping and tapping; added music, sound effects and camera movement; a choice of three reading modes ("Read to Me", "Read it Myself", and "Auto Play"); the highlighting of words as they are read; the possibility of tapping on objects in the illustrations, which then produces both the relevant written and spoken word. It also allows parents to "track their kids' reading stats and adjust settings to customize the reading experience". Parents therefore no longer read, let alone tell, stories to their children, but *provide access* to story-telling technologies and *monitor* their children's activities – by checking how many minutes they have been reading; how many pages they have read; how many words or pictures they have correctly identified, and so on. Oceanhouse's format has been adopted by many other digital children's book publishers. It is therefore important to analyze, not only individual stories, but also the digital templates that structure them. How do they redefine what stories are, what they are for, and how do they recreate the relation between the story-teller and the child?

In this chapter I will make a first move towards answering these questions by analyzing an 'app' adaptation of Dr Seuss' *The Cat in the Hat* against the background of two accounts of story-telling. The first account is that of the child psychologist Bruno Bettelheim, who, in *The Uses of Enchantment* (1978), argues that stories, especially when told by parents, should serve to help young children discover their identity and work through their conflicts and fears. Fundamental here is that stories should *enchant,* and resonate with children's already existing fears and fantasies. The second is that of Walter Ong (2002), who also talks about oral stories and reminds us that, in oral cultures, knowledge was transmitted through stories, rather than through the expository and instructional genres which writing would facilitate. Fundamental here is that stories, while always also entertaining, can be a medium of acquiring knowledge about cultural practices and about the natural world.

This can make my question more specific. Does the app's emphasis on practicing reading and literacy skills ("apps that uplift, educate and inspire") interfere with enchantment? Or should we see it more positively, as making learning more enjoyable and meaningful by linking it to enjoyable and meaningful stories? After all, Bettelheim also said that "the acquisition of skills, including the ability to read, becomes devalued when what one has learned to read adds nothing of importance to one's life" (1978: 4). I will attempt to answer these questions by first discussing Bettelheim's and Ong's points of view at greater length, to then analyze the adaptation of *The Cat in the Hat* – the adapted story as well as the adaptation.

2. Enchantment

For Bruno Bettelheim, storytelling is of fundamental importance to children. It helps them to discover their identity and to find ways of dealing with their fears and inner conflicts – the fear of being abandoned and left alone; the difficulty of understanding the often unpredictable behaviour of adults; the need to channel the upsurges of anger that can sometimes overpower them, and so on. Fairy tales are most effective in achieving this, says Bettelheim, because they state things in simple straightforward ways and translate emotions and internal processes into visual images:

> When the hero is confronted by difficult inner problems which seem to defy solution, his psychological state is not described; the fairy tale shows him in a dense, impenetrable wood, not knowing which way to turn, despairing of finding the way out. (Bettelheim 1978: 155)

Most importantly, fairy tales do not try to protect children from fears and anxieties, or from confronting death, suffering, and cruelty. When well-meaning adults try to protect children from such things, says Bettelheim, they do not realize that children have a vivid imagination and think about pain and cruelty and death anyway. It is better to bring it all out in the open through stories about their disturbing fantasies and conflicting emotions. Here is an example (Bettelheim 1978: 27):

> Encouraged by discussion about the importance fairytales have for children, a mother overcame her hesitation about telling such "gory and threatening" stories to her son. From her conversations with him, she knew that her son already had fantasies about eating people, or people getting eaten. So she told him the tale of

> "Jack the Giant Killer". His response at the end of the story was "There aren't such things as giants, are there?" Before the mother could give her son the reassuring reply which was on her tongue – and which would have destroyed the value of the story for him – he continued, "But there are such things as grown-ups and they're like giants." At the ripe old age of five, he understood the encouraging message of the story: although adults can be experienced as frightening giants, a little boy with cunning can get the better of them.

To achieve such understandings, says Bettelheim, fairy tales should not be naturalistic, not be located in the child's recognizable everyday world. This is the reason that fairytales begin as they do: "Once upon a time…", "At a time when animals still talked…", "In olden times when wishing still helped…" (the latter being the beginning of the Brothers Grimm story "The Frog King, or Iron Henry"). Everyday *outer* reality must be left behind to connect with the fantasies that dominate *inner* reality. This does not mean that fairytales are not true, only that they are true to the emotions and conflicts of *inner* reality – they are "unreal, but not untrue" (Bettelheim 1978: 73).

Finally, stories should be told rather than read, so that the child can connect to what goes on in the family and in the child's life:

> While reading alone, the child may think that only some stranger – the person who wrote the story or arranged the book – approves of a young child outwitting and cutting down the giant. But when his parents tell him the story, the child can be sure that they approve of his retaliating in fantasy for the threat which adult dominance entails. (ibid: 28)

When telling a story, the adult can sense the child's reactions and respond to them, so that the story can become "an interpersonal event, shaped by those who participate in it" (ibid: 151), especially if it is told more than once and if there is time to reflect on it, or discuss it, as in the above example – though, says Bettelheim, this should be done without 'explaining' the story in terms that detract from its enchantment. But such interpersonal events can also fail, as in this example:

> A father was about to leave his much more competent wife and his five-year-old son, both of which he had failed to support for some time. He worried that his son would be entirely in the power of his wife, whom he thought of as a domineering woman, when he was no longer around. One evening the boy requested that the father tell him a bedtime story. His father chose "Hansel and Gretel", and when the narrative reached the point where Hansel had been put into the cage and was being fattened to be eaten by the witch, the father began to yawn and said he felt too tired to continue. He left the boy, went to bed and fell asleep. Thus Hansel was left in the power of the devouring witch without any support as the father thought he was about to leave his son in the power of his dominant wife

> Although only five years old, the boy understood that his father was about to abandon him, and that his father thought his mother a threatening person, but that he nonetheless saw no way to protect or to rescue his son. While the boy may have had a bad night, he decided that since there seemed to be no hope of his father's taking good care of him, he would have to come to terms with the situation he faced with his mother. The next day he told his mother what had happened and spontaneously added that even if Father were not around he knew that Mother would always take good care of him. (Bettelheim 1978: 151)

3. Instruction

Stories not only enchant, they have also long served as a source of knowledge about cultural practices and the natural world. In oral cultures "you knew what you could recall" (Ong 2002: 33), and for this reason knowledge had to be encoded in a memorable form, in "heavily rhythmic, balanced patterns, in repetitions or antitheses, in alliterations and assonances, in epithetic and other formulaic expressions, in standard thematic sessions (the assembly, the meal, the duel, etc), in proverbs which are constantly heard by everyone so that they come to mind readily" (ibid: 34). Such patterns had a double function. They not only facilitated recall, and hence the internalization of the message, but also added an aesthetic dimension. Rhetoricians have traditionally focused on the former, literary scholars on the latter – as in the Prague School concept of the 'poetic function', where language is not used "in the service of communication" but foregrounds "the act of expression, the act of speech itself" (Mukarovsky 1964a [1932]: 19). But oral cultures did not distinguish between the pragmatic and the aesthetic function – they always integrated the two.

Another way of making 'what you know' memorable was by embedding it in stories, to avoid the abstractions that structure knowledge 'objectively' and place it at a distance from lived experience, and to focus on "conceptualizing and verbalizing it with more or less close reference to the human lifeworld" (Ong 2002: 43), as Ong explains with reference to Homer:

> In the latter half of the second book, the *Iliad* presents the famous catalogue of the ships – over four hundred lines – which compiles the names of Grecian leaders and the regions they rule, but in a total context of human action: the names of persons and places occur as involved in doings (…) oral cultures know few statistics or facts divorced from human or quasi-human activity. (Ong 2002: 43)

Again, detailed navigation procedures, crucial to Homeric culture, would be encountered in passages where "abstract description is embedded in a narrative presenting specific command for human action or accounts of specific acts" (Ong ibid.), as in this quotation:

> As for now a black ship let us draw to the great salt sea
> And therein oarsmen let us advisedly gather and thereupon a hecatomb
> Let us set and upon the deck Chryseis of fair cheeks
> Let us embark. And one man as captain, a man of counsel, there must be,

Such ways of preserving and distributing knowledge have long continued, even in writing cultures, as for instance in Lucretius' *On the Nature of Things*, written in the 1st century A.D., which is a poem exploring physics in Homeric hexameters and poetic language:

> Indeed, if in a ball of wool there be
> As much of body as in a lump of lead
> The two should weight alike, since body tends
> To load things downward, while the void abides

Such poems have also often been the first works of literature written in local languages rather than in Latin, as in *Der Naturen Bloeme* ('The Flower of Nature'), a long and richly illustrated 'leerdicht' ('didactic poem') by the medieval Dutch writer Jacob van Maerlant (1235–1300), in which he summarizes the physical and biological sciences of his time.

Today, this combination of functionality and aesthetics is returning. Advertisements, for instance, must provide information in a memorable form, but also be pleasurably seductive. They therefore use precisely the same patterns that Ong listed as characterizing oral poetry. And advertising is not the only genre in which this happens. Many genres of writing that used to be formal and bureaucratic (business letters, invoices, resumes, reports, presentation slides, brochures, newsletters, etc.) must now combine functionality and aesthetics, and 'look good' as well. Microsoft Office provides a wide range of templates for non-professional designers: "If you think a document that looks this good has to be difficult to format, think again!" says a Word template for company brochures, and "Add professional quality graphics which automatically match the look of your report". The same can be seen in educational texts. They no longer are, in Kress's words "expositions of coherent 'bodies of knowledge' presented in the mode of writing" but "collections of worksheets organized around the issues of the curriculum (…) presented through image more than writing" (Kress 2003: 7). The American sociologist Martha Wolfenstein noted something similar already in 1951, commenting on a primary school mathematics textbook titled *Adventures in Numbers* and featuring a cowboy on a galloping horse on its cover:

> The traditional image of the American schoolboy has been that he sits with a large textbook propped up in front of him, a book representing the hard and tedious lessons which he wants to evade. And inside the textbook he conceals a book of Wild West stories, detective stories, or the like, which he is avidly reading. These two books have now been fused into one. I do not know whether this succeeds in making the arithmetic more interesting. But I have a suspicion that it makes the cowboys less exciting.
>
> (Wolfenstein 1951: 176; see also Mead & Wolfenstein 1951)

It is this tension between enchantment and instruction I will now seek to investigate in the book and 'app' version of *The Cat in the Hat*.

4. *The Cat in the Hat*

Let me begin by recounting the story. Sally and her brother (the first person narrator whose name is never revealed) are at home, looking listlessly out of the window. Their mother is away. It is cold and rainy outside. They are bored.

Then the Cat in the Hat enters:

> 'I know it is wet
> And the sun is not sunny
> But we can have
> Lots of good fun that is funny'

He proceeds to entertain them with a series of juggling tricks, standing on a ball and juggling increasingly many objects – an umbrella, a tray with a full bottle and glass, a book, a birthday cake – and the children's fish in a bowl, who is quite worried about all this:

> 'But our fish said,
> "No! No! Make that cat go away!
> Tell that Cat in the Hat
> You do NOT want to play.

But this warning is not heeded and the Cat in the Hat continues his act, finally juggling too many objects and crashing down, creating an unholy mess.

Next the Cat in the Hat brings in a big red box from which he unleashes two small creatures, 'Thing One' and 'Thing Two'. They look like children, but have a wild mop of hair and an animal-like snout. Again the fish warns the children:

But our fish said, “No! No!
Those Things should not be
In this house! Make them go”

Soon Thing One and Thing Two run around the house “with big bumps, jumps and kicks, and all kinds of bad tricks”, even in the Mother’s bedroom (there is no trace of a Father). Now the young narrator begins to get worried:

And I said
“I do NOT like the way that they play!
If mother could see this,
Oh what would she say!”

So he catches the ‘Things’ with a net, and orders the Cat in the Hat to leave. But what to do with the mess they have left behind?

This mess is so big
And so deep and so tall
We cannot pick it up.
There is no way at all!”

At this point the Cat in the Hat returns, riding into the house on a complicated machine from which mechanical hands protrude which quickly pick up the rubbish. Once order is restored, the Cat in the Hat leaves, just before the Mother returns.

“Then our mother came in
And she said to us two,
“Did you have any fun?
Tell me. What did you do?”

But the children do not know whether to tell her the truth or keep it a secret, and that is where the story ends:

“Should we tell her about it?
Now, what SHOULD we do?
Well… what would YOU do
If your mother asked YOU?”

This story is about transgression, about children’s inclination to be naughty – a common theme in books for children. In ‘The Wild Bears’, for instance (Richardson 1997; cf. the discussion in Caldas-Coulthard & Van Leeuwen 2003), two children tell their teddy bears to guard the house while the family is away. But as soon as they have left, a family of five wild bears enter. The children’s teddies tell them they cannot come in, but they march right inside, and, once inside the house, make a big mess, breaking toys, splashing water everywhere and generally leaving a chaos behind. When the family comes home, the children's teddies are accused. But as it happens, one wild teddy has accidentally stayed behind (ibid.: 43):

> That night Jack woke up suddenly. There was a creaking noise, them to his amazement, he saw the toy cupboard open and a small dark shape scamper across the room to the window and climb out.
> "Don't come back!', shouted the two tame teddies.
> "Don't worry, we won't", said the tiny little baby bear called Grub. And they never did.

David Riesman (1951) discussed a children's book called *Tootle*, in which Tootle "is a young engine who goes to engine school, where two main lessons are taught: stop at a red flag and "always stay on the track, no matter what". But then Tootle "discovers the delight of going off the tracks and finding flowers in the field", to the dismay of the engine schoolmaster. In the end he promises to be good and never leave the track again, and "is rewarded by the cheers of the teachers and the assurance that he will indeed grow up to be a streamliner" (Riesman 1951: 240). In all these stories, children go 'off the tracks' and must learn to behave as adults expect them to. The stories therefore serve the interests of adults, rather than that they engage with children's fears and inner conflicts. Unlike fairy tales, they do not "present the rewards of virtue in any unambiguous form or show the adult world in any wholly benevolent light" (ibid).

In *The Cat in the Hat*, however, adults play no role in getting the children 'back on track'. It is the children themselves who on the one hand enjoy being naughty, but on the other hand know when to stop, albeit that they can only do so with the help of magic. The Mother never knows. The story thus sanctions a measure of naughtiness, provided it is hidden from adults and ultimately kept within bounds. And secondly, the Cat in the Hat is himself a kind of adult – a fun adult rather than a disciplinarian adult, an adult who incites transgression, yet also helps children to keep it within bounds.

These aspects of *The Cat in the Hat* resonate with changes in the relation between adults and children that came about in the period in which Dr Seuss wrote the story. As Riesman wrote (1951: 237), adults began to realize that the peer group, and children's popularity within it, was beginning to play a much more important role in children's lives, and that they had to make space for this and acknowledge it some degree:

> Matters would be relatively simple for parent and child if the market demanded complete conformists. Then, at least, expectations would be clear – and rebellion against them equally clear. What is expected of children and adults, in the middle and upper educated strata at least, actually is difference – but not too much (…) Progressive parents (…) have learned to welcome a certain amount of rebelliousness or difference. (Riesman ibid.)

Reading stories like *The Cat in the Hat* to your children therefore assures them that you approve of them being a little naughty so long as they clean up afterwards, and that they are allowed a certain amount of freedom from parental control.

In roughly the same period the depiction of adults in popular children's literature also changed. Adults, especially male adults, became either clowns, 'funny Uncles' like the Cat in the Hat, or inept and bumbling, like Donald Duck. The Dutch historian Geert Mak recalls the first Dutch issue of Donald Duck, in the early 1950s, delivered door to door and free in half the country:

> Most of the pictures inside were in black and white but they nevertheless made a deep impression. A duck as a school teacher! And one of the nephews just pressing an icecream to his forehead when he complains about a headache! Unheard of liberties, set in a world only dimly known, of cars, refrigerators and televisions.
> (Mak 1999: 418; my transl., TvL)

In such stories it is often the children, rather than the adults, who know what is best. I remember reading *The Bear Scouts* (Berenstain & Berenstain 1967) to my children in the 1970s. In this story Father Bear sets out on a hiking trip with his sons, who also bring along a Boy Scout Manual. Mother Bear prepares the sandwiches and is thereafter absent, like the Mother in *The Cat in the Hat*. Nothing the Father proposes goes right and time after time the young bears must resort to the Boy Scout Manual to avoid disaster. In the end the Father, after a bad fall, is carried home by his sons on a stretcher, the construction of which they have learnt from the Boy Scout Manual. I do remember asking myself why I should read them a story that made fathers into 'silly Daddies' and undermined any authority I might potentially have had – and why it so delighted my children (I had not yet read Bettelheim at the time).

Read or provided by parents, such stories sanction new relationships between parents and children and magically assure a happy ending to a dilemma children encounter: how can I at once please my parents *and* do the 'naughty' things I need to do to be part of my peer group, to be part of what is happening now, in my generation? *The Cat in the Hat*, though not exactly a fairy tale, therefore does respond to such children's dilemmas; it is not (yet) a didactic text, even though recent editions praise it as "ideal for children just beginning to read on their own".

5. The adaptation

Oceanhouse's adaptation of *The Cat in the Hat* closely follows the original. The written text and the illustrations are unchanged, in contrast, for instance, to Disney adaptations of children's classics such as *Winnie The Pooh*. But it does add two key elements: enhanced multimodality and didactic interactivity, the former through the addition of sound, music and camera movement, the latter through a range of interactive options, including matching the pictures and the words, as well as the written and the spoken words.

Sound

Throughout the story we hear the sound of the rain, fading up as the door is opened for the entry of the Cat, or, later, the Mother, and fading down when the door is closed again. Mixed in with this, selected spot effects can be heard: the opening and closing of the door and of the box from which the 'Things' will emerge; the crashing and clattering of falling objects when the Cat's juggling act collapses, and the bangs and crashes of the 'Things' as they rampage through the house; the sounds of the Cat's magic machine (a slow and regular pounding of pistons overlaid with springy, cartoon-like 'boing' effects); the footsteps of the mother as she is approaching, towards the end of the story; and the excited high-pitched squeals and squeaks of the 'Things", almost like the sound of mice, but sometimes resembling words ("rackety rackety rackoo…yeah") – un-human, or not yet quite human sounds, even though other aspects of their behaviour are human – they walk upright, shake hands with the children, and (at least in the text if not in the sound effects) speak like humans. There is also the sound of turning pages, the only sound that is actually synchronized with a movement – the swiping movement of the child's finger.

These sound effects are therefore by and large used to add realism and 'presence' – although this effect is perhaps somewhat diminished by the less realistic modality of the drawings and the absence of synchronization caused by the lack of visual movement.

Voice

The voice that reads the book is a male voice with a non-descript Mid-Atlantic accent. Nothing is done to give character and distinctiveness to this voice – it is a neutral, professional voice, reading with clarity, so foregrounding the didactic function of the app rather than the enchantment of the story.

Music

Music is used at the beginning of the app, accompanying the ‘cover’, which in fact zooms out from the book’s original front cover to a landscape format that includes icons that can be clicked to access the different modes of reading which the site provides. It starts with a short piano introduction, then moves to a melody which at first remains fairly static, creating anticipation as to what will happen next, to then move up a little more energetically before returning to the original pattern. The orchestration includes a xylophone, which, thanks to Carl Orff, has a childish connotation, and a repetitive bass pattern played by a tuba which gives a somewhat humorous ‘oompah’ effect.

This theme returns at the end, over the text which asks ‘you’, the reader, whether you would tell your mother.

As the Cat is juggling, a four note, chromatically ascending motif is repeated two or three times. Moving up a semitone each time a new object is added, also increasing suspense.

Music is therefore used in two ways, both inspired by the use of music in movies – to frame the story and provide a ‘key’ to its overall modality, establishing it as a ‘fun’ children’s story, and to enhance suspense using standardized Hollywood methods.

Camera movement

The story’s characters and events are not animated, but camera movements across the pages of the original book create something akin to filmic mise-en-scène and add a degree of dramatization.

To give two examples, when the fish is angry and says “No! No! Make that cat go away!”, we initially see a close shot of the fish, half rising from the bowl and looking angry – his anger is thus enhanced. The camera then zooms out a bit while also panning left, to end up with a two-shot of the Cat and the fish, still relatively close, suggesting a confrontation between the two (even though the fish is talking to the children). This also reveals a white space formed by the table on which the fish bowl stands and serving as a background for four lines of text. Then the camera zooms to the whole double page, including the children and the whole of the eight line text.

Again, when the ‘Things’ are making mayhem, the camera is zoomed in on a close shot of the two children near the door, looking perturbed by the goings on, then zooms out to also reveal what they are looking at – the ‘Things’ running amok. Close shots are thus used to enhance emotions – the anger of the fish, the growing concern of the children.

All these additions enhance the story's multimodality – adding sounds which, in reading the book, can only be imagined, adding mood and dramatizing the story a little in ways that are inspired by Hollywood conventions.

Reading the story

As mentioned above, the story can be read in three ways, chosen by tapping one of the three book icons on the 'coverpage' – or rather the hybrid of a front cover and a home page – 'Read to Me', 'Read it Myself', and 'Autoplay'.

In the case of 'Read to Me', the story is read by the voice over and, as he is reading, words are highlighted in red (or white, when the background is blue) at the very moment he reads them. Attention is therefore drawn to the form of the written words, rather than the meaning of the spoken word. After the text has been read, the image remains (together with the sound effects) until the child turns the page. There is therefore, on each page, the option of continuing the story, or interrupting it by playing with the interactive options.

In the case of 'Read it Myself' the story is not read, and only displayed visually. All else is the same as in the 'Read to Me' option.

In the case of 'Autoplay', the story is read by the voice over, but it is possible to click on words or pictures during the reading. The written words corresponding to the pictures then fly in, and multiple taps can create an avalanche of words. When one of my colleagues filmed her five-year-old son playing with the app on his own, it was predominantly this avalanche effect that fascinated him – the touch screen was used as a kind of drum and the story played no discernable role in what he was doing.

Interactivity

Other than turning the pages forward or backward, there are two possible actions: tapping the text and tapping the pictures.

Tapping a word in the text will result in that word being read individually (even prepositions, articles etc.). Pressing the screen for a longer time will cause the whole of the text to be read again. Tapping on the pictures will cause the name of whatever object is being tapped to be superimposed on the screen (in a large, bold, blue font) and to be heard at the same time. But there are a number of pitfalls:

1. The same objects yield different words at different points in the story. Tapping on the window of the room, behind which we see streaks of rain over a blue-grey background, sometimes yields 'wet', sometimes 'cold' – and

never ‘window’, even though tapping on doors yields ‘door’. Similarly, tapping on chairs sometimes yields ‘sit’, sometimes ‘chair’. When the cat is juggling, many (but not all) of the objects he is juggling can be tapped, but when they have fallen on the ground they only yield the word ‘mess’.

2. Not all objects can be tapped – or tapped at every point in the story. For instance, the cat’s red bow tie almost always produced the word ‘bow tie’ but the equally salient bow in Sally’s hair does so only once, even though it is seen on almost every page. Different body parts of the cat can be tapped – for instance, ‘hand’, ‘head’ and ‘tail’ – but this is not the case with the bodies of the children and the ‘Things’.
3. Some names are idiosyncratic– for instance tapping the cat’s cleaning machine yields ‘good trick’ and the broom, even when finished brushing yields ‘mess’, not ‘broom’.
4. Tapping is not always precise – an attempt to tap on the ‘little toy man’ yielded the word ‘rake’ (a rake being depicted next to the little toy man).
5. On some pages tapping a particular object results in a plural noun (e.g. ‘books’, ‘pictures’), on others in a singular noun.

Such inconsistencies could be confusing and make the app’s potential for learning less convincing.

– Parental control

As mentioned, there are options for parents too. A separate section of the app first tells them how “this app delights, educates and inspires YOUR young reader” – who can “tap, drag and tilt to find playful surprises”. As a parent you can then “follow your child’s progress” as they use the app by tracking the minutes the child has spent reading, the pages he or she has read, and so forth.

6. Conclusion

Overall, it can be said that the interactivity in this app (and in the many other apps that use the same system) is not used in the service of storytelling – it cannot advance the story, enhance it with details, steer it in certain directions, and so on. Instead it only serves the didactic purpose of learning to read, as constructed by the app, distracting from the continuity of the story and hence from its spell – the additional sound effects and camera movements notwithstanding.

As a resource for learning, meanwhile, the app has several drawbacks. It divorces reading from writing, from the physical base which is so important in learning to read (cf. e.g. Longcamp et al. 2005; Li et al. 2016). It appears to have been produced with little input from educationalists and provides no evidence to back up its educational claims. And, most importantly, it makes learning a solitary activity. The new digital media have sometimes been said to introduce a 'secondary orality', but if so, this secondary orality lacks some of the key virtues of primary orality – contextualization and joint construction of meaning. Of course, contextualization and joint meaning making can be, and are, reintroduced when parents or teachers use the apps together with children, but this does not take away that the apps themselves do not provide for this in the way that, for instance, social media do, by facilitating dialogue. The apps have been designed as if they can do the whole job by themselves, so that parents and teachers only have to monitor what children are doing on their own, as 'managers' of, rather than participants in, their children's activities. Thus storytelling becomes like 'work', its productivity measured in ways previously only applicable to work. To paraphrase Wolfenstein, to embed this in stories may well make learning to read more fun, but it may also make the stories less enchanting and less successful in getting their key message across in the way only stories can.

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CHAPTER 6

Self-containment and contamination

Two competing circuits of adaptability

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This chapter explores two competing models of adaptation of discourses: self-containment and contamination. The first model is contradictorily a *non-adaptable* framework that scales the social circulation of text and talk as expandable, i.e. scalable, yet seemingly un-modifiable in its expansion. The second is embedded in the singularity of encounters, and does not aim to be valid everywhere in the same way. To investigate the circulation of these models of adaptation in contemporary Brazil, we tackle some of the narratives forging the 2016 Olympic sporting event and the 2014 World Cup. The established connections produce a provisional panorama in which the friction of scalable and non-scalable narratives produces collaborative trans-contextual plots which are the outcome of relations of mutuality.

Keywords: discourse, neoliberalism, textual analysis, scalability, contamination

1. Introduction

In 2007, Brazil was officially confirmed as the host nation for the 2014 FIFA World Cup. Two years later, in 2009, Rio de Janeiro won the bid to host the Summer Olympic Games of 2016. These accomplishments were celebrated by many in different ways. The former filled the nation with ecstasy and excitement at the possibility not only of strengthening the country's image in the international scenario but also of generating employment and income. The latter was felt as reaffirming Rio de Janeiro's iconicity of the economic prosperity that Brazil had been enjoying in the face of a severe global recession. Touted by the corporate media and other sectors of the market as a "global country" and a "global city", Brazil and Rio de Janeiro respectively became important nodes in the transnational route of symbolic and financial capital, after decades of financial decadency and increasing inequalities (Gaffney 2010, 2013; Barreira 2013; Barbassa 2015). Yet by the time both the World Cup and

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the Olympics came about, the financial crisis affecting the Northern countries had reached Brazil. In 2013–2016, the scenario of economic instability and escalating political discontent prompted the opposition in the lower house to initiate an impeachment process against the president, Dilma Vana Rousseff, the woman who had succeeded Luiz Inacio Lula da Silva in the presidency after implementing many of his world-acknowledged social policies. Largely supported by the corporate media, the Federation of Industries in the State of S. Paulo (FIESP), and the upper middle classes, the impeachment process was considered by many political observers and left-wing activists as a *coup d'état* to oust the Workers' Party center-left government from the federal administration – something the opposition had failed to do democratically in three successive presidential elections (Greenwald, Fishman, & Miranda 2016; Souza 2016; Uchoa 2017).

Dilma Rousseff was initially suspended in May 2016, two years after the World Cup and three months before the Olympics took place. While both events attracted global attention, it was inevitable that disjunctions in modes of producing and communicating politics came to the fore. An instance of such disjunctions is the performance of the very person who was lifted to the post of interim president, Michel Temer. A vice-president in Dilma's two incumbencies (2011–2014, and 2015–2016), Temer himself participated in the orchestration of the impeachment. He is a leading figure in the Partido do Movimento Democrático Brasileiro (Brazilian Democratic Movement Party), a powerful political group in Brazil since the return to democratic rule in 1985. If on the one hand this party had provided the necessary votes for progressive bills – such as the cash transfer program for the poor known as Bolsa Família and a massive housing program known as Minha Casa, Minha Vida, along other policies –, on the other hand it had been known as a party with no clear ideological basis that works by forming a supermajority of representatives to trade votes for (often illegally obtained) financial resources (Fortes 2009; Nobre 2013a; Anderson 2016). Temer was booed by the public in his shy appearances at both the opening and closing ceremonies of the Olympic Games. In one of few press conferences that he attended at the event, Temer insecurely talked within a fence designed to keep him at distance from journalists. The German newspaper *Süddeutsche Zeitung* ironically framed his gated appearance in the following terms:

> The iron cage in the press center is a bizarre construction designed for an equally bizarre entrance. One of the most fearful persons in contemporary Brazil, the interim president Michel Temer, talked to the press. (Hermann 2016)

Temer's fear of speaking to journalists and to the 'public' during the event indexes a particular mode of doing politics – a palace politics, entrenched in the power structure and oblivious to people's needs. Additionally, this fear betrays a particular form of talking about it. The formation of political coalitions, which his party and his figure embody so well, has been a way of shielding Brazil's Federal Congress and Senate from social demands and preventing change in the political system. His talk was as self-contained and bounded by fences as is the type of bloc-politics that his administration projected as a monolith in Brazil, avoiding the transformation that public encounters and public debates engender. Ten days after the 2016 Olympics ended, an impeachment trial in the senate permanently removed Dilma Rousseff from office. Temer was then declared the official leader of Brazil's executive. He conducted the country through very turbulent times, that coincided with the election of Jair Bolsonaro, who succeeded him and has since escalated the political crisis.

Temer's coalition of right-wing representatives had hastened to deploy a series of austerity measures and neoliberal reforms – freezing of public spending for 20 years, market-oriented reform of social security and workers' rights, redesign of the public high school system, among others – in a demonstration that their politics were a *non-adaptive* application of projects designed elsewhere in the Globe.[1] In other words, like monoliths, neoliberal principles that were first experimented in the Pinochet era in Chile – a minimal State, a free market, privatization of social security, unregulated exploitation of natural resources – have been travelling somehow homogenously around the world. In Brazil, the tense pact between a stronger State and a neoliberal economy that had been promoted by the center-left

1. The project of a 'minimal state' that provides the means for a free market and consequently for social relations, also known as neoliberalism, draws from a particular model of adaptation – namely, self-containment, as we define later in the introduction. Alfredo Saad-Filho and Deborah Johnston (2004: 3) claim that "'[t]he most basic feature of neoliberalism is the systematic use of state power to impose (financial) market imperatives in a domestic process that is replicated internationally by 'globalisation''. In other words, as a form of adaptation of economic theories, neoliberalism is a project – "the systematic use of state power to impose (financial) market imperatives" – that travels (i.e. is adapted) around the globe – "replicated internationally by 'globalisation'". The first experimentation of neoliberal policies had Chile as laboratory. David Harvey (2005) comments that the theories of Milton Friedman and his colleagues from the University of Chicago formed the rationale for the deployment of neoliberal measures in the emergency government of Augusto Pinochet, Chile's authoritarian president between 1974 and 1990. The Chilean General hired a group of economists from the Catholic University of Santiago who had been trained at Chicago. Influenced by the ideals of these economists, and working in sync with the IMF, the Chilean government "reversed nationalizations and privatized public assets, opened up natural resources (fisheries, timber, etc.) to private and unregulated exploitation (in many cases riding roughshod over the claims of indigenous inhabitants), privatized social security, and facilitated foreign direct investment and freer trade" (p. 8). Yet the economic recovery of Chile did not last long. A Latin American debt crisis in 1982 deeply affected the first neoliberal experiment. After the pioneering test in Chile, Margaret Thatcher and Ronald Reagan would fit the neoliberal monolith into the British and North American economies. Harvey hastens to add that "[n]ot for the first time, a brutal experiment carried out in the periphery became a model for the formulation of policies in the center" (p. 9).

governments of Lula and Dilma between 2003 and 2016 has given way to an austere neoliberal block which, involving the reduction of social policies, the violation of labor rights, and cuts in wages and salaries, has travelled without change from Greece to contemporary Brazil under Bolsonaro.

At the same time, however, the streets of Rio de Janeiro and other Brazilian cities have witnessed a political outcry that responds to this mode of conceiving and communicating politics. For instance, in June 2013, a year before the World Cup happened in Brazil, millions of people took it to the streets of most large cities to protest for various causes, in spontaneous demonstrations that refused leadership, centrality and hierarchy. As Brazilian philosopher Marcos Nobre (2013b) claims, the June 2013 protests were sparked by a deep social discontent with institutional politics. Unable to find channels to express their desire for better urban mobility and public services, as well as their dissatisfaction with corruption, the shielding of politics from public demands, and the waste of public money on sports events at the expense of social welfare, a multitude of people gathered in the streets holding hand-made posters like "We deserve better education" and "We want schools and clinics Fifa standard." In spite of the security apparatus that suppressed large protests during the Federations Cup, the World Cup, and the Olympics, horizontal and transformative manifestations like the June 2013 protests flourished in Brazilian cities during these events (Nobre 2013b; Caldeira 2015; Holston 2013; Dent & Pinheiro-Machado 2013). As opposed to the non-adaptation of transnational neoliberal principles and to the self-containment of contemporary politics in Brazil, protests against mega-events have drawn from the friction of public encounters with different others and the transformation that such frictional interactions may yield.

In the myriad forms of adapting discourses about urban change and the economic apparatus for the World Cup and Olympic Games in Brazil, this chapter intends to single out two competing models of adaptation of discourses in society. As we sketched above, the first model of discourse adaptation that concerns us is contradictorily a *non-adaptable* framework or matrix that scales – i.e., measures, weighs, compares, and makes an object or a bundle of objects socially meaningful – the social circulation of text and talk as expandable yet seemingly un-modifiable in its expansion. Following Anna Tsing's (2012) work on scalability, we will call this form of adaptation "self-containment." Tsing positions projects and narratives of modern progress within this framework. In her critique of expansionist modern projects that have exploited populations and ecosystems in the name of development, she comments that historically "[t]he expansion that counted as progress did not allow changes in the nature of the expanding project. The whole point was to extend the project without transforming it at all. Otherwise it would not have added to the universal prowess imagined as progress" (Tsing 2012: 506–507). In Tsing's terms, the non-adaptable design of modern projects such as the Portuguese sugar cane plantation, globalized chains of fast food and services, and garment factories – anchored on the conceptual operation of scalability, i.e., growing without changing original design features – allowed for their experimenting in some regions and grafting into others, unmodified.

Referring to humanity's first scalable project, the Portuguese plantation of sugar cane in Ilha da Madeira and its successful transplanting to colonial Brazil, Tsing (2012: 513) comments: "The experiment was a success: great profits were made in Europe, and most Europeans were too far away to see the effects. The project seemed, for the first time, scalable. Sugarcane plantations expanded and spread across the warm regions of the world. Their contingent components – cloned planting stock, unfree labor, and conquered, thus open, land to put them on – showed how making nonsoels [scalable units] could lead to unprecedented profits." She adds that this successful experiment translated into the invention of 'modernity' itself: "Even now, we see a trace of the plantation in conditions we think of as modern. Modernity is, among other things, the triumph of technical prowess over nature. This triumph requires that nature be cleansed of transformative social relations; otherwise it cannot be the raw material of techne. The plantation shows how: one must create *terra nullius*, nature without entangling claims" (Tsing 2012: 513). This modernist model of adaptation is by definition self-contained inasmuch as the expansion that mattered was not transformative but homogeneous and conservative: the sugar plantation ruined local biodiversity, social relations and interspecies cohabitation by privileging an economic model that subjected indigenous populations, enslaved Africans and a diverse ecology to a homogenous project devised to benefit a few (Tsing 2012: 510–515; 2015, Chapter 3).

The second model, which we will call *contamination*, may be seen in our depiction of public responses to the self-contained political matrix that couched the 2014 World Cup and the 2016 Olympic games. A different form of conceiving discourse circulation and adaptation regimented the dissident utterances that swarmed in Brazil during the preparation for the sports mega-events. The multiple voices that spread in Brazilian streets and in the social media, concerning the economic apparatus for the Games, scaled text and talk as plastic forms that are transformed in the encounters. Marked by the friction that is yielded in the contact with different others, the linguistic and semiotic resources imagined by frameworks of contamination do not travel homogeneously across different social domains; rather, they change or get contaminated along the way. Contamination often refuses centrality. Marcos Nobre (2013b: 20–21) comments that the 2013 June protests against the massive public spending for the World Cup and Olympics were "movements that were formed and articulated with no relation to a political party, thus standing as independent and autonomous from central or local governments. They [were] horizontal movements, refusing the idea of representation as being conflated into an individual leader." To use Tsing's vocabulary, contamination is not grounded on *scalability* to the extent that it is not valid everywhere in the same way. Instead, this form of circulation is *nonscalable* as it is embedded in the singularity and indeterminacy of encounters. A nonscalable project is unable to travel without being contaminated by the engagement or clash with others. Characteristic of the contemporary flows of texts and people, contamination draws from the "friction that has been exacerbated by the explosion of digital communication" (Fabricio 2014: 18) and from communicability (Briggs 2005, 2017; Briggs & Hallin 2016), i.e. the infectious metapragmatic mapping of the production, circulation, and reception of discourse.

To investigate the flux of these models of discourse adaptation in contemporary Brazil, we organize this chapter by resorting to a scale-inspired design and by rearranging naturalized genre conventions of the academic writing monolith. We start by zooming in on our research data, exploring them analytically before we engage in theoretical-methodological-analytical considerations. We assume that the concepts and technical jargon we employ – as scaling strategies – will make sense and cohere along the way in our attempt to project nexus, produce associations and establish connections. Therefore, without further ado, we tackle some of the narratives forging the 2016 Olympic sporting event and the 2014 world tournament.

2. The self-contained Olympic model in Rio de Janeiro

A modern enterprise par excellence, the Olympic Games have been an economic and ideological model that propagates globally. Christopher Gaffney (2016), an urban geographer who witnessed the transformations in Rio de Janeiro for the 2016 mega-event, explains that the Olympic model, in its current configuration, is a "*monolith* [that] roll[s] on [from Brazil] to Russia and East Asia," and that Rio de Janeiro, a city that hosted both the 2016 Olympics and a major part of the 2014 FIFA World Cup, exposed the "tightly braided relationships between mega-events rights holders (IOC and FIFA), the 'primary stakeholders' of the event (Coca-Cola, McDonalds, Dow Chemical, Samsung, Hyundai, etc.), the civil construction and real estate sectors and the executive branches of government." A monolith is a precise picture of the self-containment of discourses and social structures. One of the definitions of 'monolith' in the Oxford English Dictionary reads that it is "a large and impersonal political, corporate, or social structure regarded as intractably indivisible and uniform." Assuming that the indivisible and uniform economic apparatus of the Olympic project model requires a discursive form of propagation or adaptation, we may initially ask: How narratives about the Olympic enterprise and projections of the circulation of these narratives have been devised in ways that sustain the event as necessary and desirable for host cities and their residents? A critical reading of the International Olympic Committee (IOC) official website and its invocations of history may offer us an important point of departure.

'The Olympic games are a pilgrimage to the past and an act of faith in the future'. This is how Pierre Coubertin, founder of the IOC, conceived the modern Olympic Games in 1894. By later incorporating 'Citius, Altius, Fortius' (faster, higher, stronger) as the Olympic motto, Coubertin projected the games in the modern era not only as a journey through space-time, but also as a 'big' spectacle akin to the fast rhythm of modernity. Since then, the IOC has been in charge of organizing the modern version of Olympism and developing the so-called Olympic Movement of which it stands as the supreme authority. In such position, it has been presiding over all the activities and decisions involving the games besides taking care of and monitoring their propagation in the world through discourses, images, symbols, emblems, anthems and so forth. The circulation of a plethora of signs is part and parcel of a semiotic construction safeguarding the aforementioned ambition for greatness which in turn has been iterated over time, in every Olympic venue. In the presentation of its institutional aims, the IOC official website[2] preserves this aspiration in a seamlessly intact fashion.

The first page of that digital environment, resorting to a triptych vertical design, displays in succession three matching parts – "What we do", "Who we are", and "How we do it" – which together promote the institution's profile as a "not-for-profit independent international organization" whose main goals are to ensure the regular celebration of the Olympic Games and to promote the Olympic values. Composing a narrative scene (see Kress & van Leeuwen 1996), three images – a stadium staging one of the opening ceremonies; a bronze sculpture of four people triumphantly raising the five interlaced rings symbol high up in the air in exaltation (an effect suggested by a low angle shot); and record-breaker Usain Bolt, doing the famous "Lightning Bolt" pose for a photographer – recontextualize central Olympic actions which evoke the triad "faster-higher-stronger". At the bottom of the page, like a coda, the citation of Coubertin's words above, next to his picture, brings the narrative to an end – a final curtain reifying the idea of space-time amplitude and strength of the event. Such initial imagination frames the narrative and conceptual design of many other sections of the website, which keep recycling the core values of the IOC.

2. <https://www.olympic.org/the-ioc>

Among the fundamental principles orienting the committee's "activities,[3] three directly indicate the projection of an expansionist agenda. They are:

– to cooperate with the competent public or private organisations and authorities in the endeavour to place sport **at the service of humanity** and thereby **to promote peace**;
– to encourage and support the development of **sport for all**; and,
– to promote **a positive legacy from the Olympic Games** to the host cities and host countries.

Just by observing the signs we have highlighted in bold type, it is easy to detect how the 'Olympic spirit' is being scaled up as a universal and uniform entity reaching out for humankind, at the service of constructing a peaceful society (cf. the Olympic Charter 2016: 11). The magnitude of the Olympic venture is thus envisaged as being so ample that the event's positive contribution to host cities, host countries and society at large is taken to be a natural consequence. Referred to as 'the legacy' in many official documents and texts, the idea of a priceless heritage is associated with progress, advancements, benefits, and social-structural-economic developments for all, before, during and after the games.

Produced by the IOC as justification for the Olympics, this metanarrative is monolithic in that it is conceptualized as disseminating and reaching different destinations while preserving its plot, orientation, structural components and meaning-effects. It is conceived as a blueprint, so to speak, for the autonomous and non-adaptable way in which the Olympic spirit should spread and operate worldwide. Thus, looking at how this metanarrative travels from the IOC to local committees may provide us with important insights on this contemporary phenomenon of non-adaptation and self-containment. In this sense, the official site of the Rio2016 – the company that was formed to implement the Rio 2016 Olympics – recontextualized 'the legacy' discourses[4] as the very planning parameters for the transformations in the city. As an unquestioned rationale for the implementation of the Games, the legacy discourse also served as a shield against criticism, having been recurrently employed to shortcut negotiations of transformations in the city with no need for further justification other than the beneficial consequences for all.

3. For a complete list of "The Fundamental Principles of Olympism", check the "Olympic Charter" (2016: 15–16) available at <https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/General/EN-Olympic-Charter.pdf#_ga=1.136700217.868988174.1489750869>.

4. Check the official site of Rio2016 at <http://www.brasil2016.gov.br/pt-br/olimpiadas/medalhas-do-brasil-em-2016>.

Beyond the official narratives of the IOC and the Rio2016, how has the Olympic model been transposed to other discursive domains? In what follows we will explore the self-reliant construction and scalar ambitions of this model by focusing on two emblematic moments of narrative production. The first one is an article praising the legacy left by the games, "The Olympics leaves us hope as its legacy", published in *Isto É*[5] – a mainstream weekly magazine addressed to an elite decision-making Brazilian audience. The excerpt below is representative of the celebratory discourse anchoring not only the *Isto É* report[6] but also many other media texts covering the Olympics.

The Olympics leave us hope as its legacy

While the BRT (Bus Rapid Transit), abbreviation naming the buses equipped with air conditioning circulating in expressways in Rio de Janeiro, approaches quickly, a group of Brazilian fans celebrates the gold medal won by boxer Robson Conceição minutes before. They are happy, full of invigorating national pride, singing their hearts out in worship of the country where they were born. "Brazil, Brazil, Brazil", they scream, to the astonishment – with a touch of envy – of the foreigners on the same bus ride. The scene translates the three major legacies the Olympic games will leave. The first one has to do with the improvements brought to the host-city. As the ubiquitous symbol of the Games in Rio, the BRTs are a great accomplishment. Comfortable, fast and efficient, they run through, thanks to the 2016 Olympic Games, 155 kilometers of motorways, and will be able to meet the needs, right after the competition, of 2,5 million people. Robson's triumphant victory, number one boxer in Brazil in nearly 100 years, is the perfect image of the sports legacy, the proof that the Games in Brazil have helped to develop forgotten sports in the country. The third legacy is probably the most tangible. As it has not been seen in a very long time, Brazilians are full of hope, happy with the Olympic event they were able to organize and with the rare opportunity to enjoy a luminous period in one of the most luminous cities in the world. The Olympic Games revitalized our self-esteem and swept away the political and economic discontent that have paralyzed the country in the last two years. (…) In the transport sector, the benefits are even more evident. Besides the BRTs, the city won a new metro line linking Ipanema to Barra da Tijuca. If before the average journey time was more than one hour by car, now it is possible to take from one pole to the other on metro rail in 20 minutes. Moreover,

5. *Isto É* is a market-driven publication which has given in to sensationalist and denunciation practices while claiming to do investigative journalism.

6. The text was published on 19 August 2016 and can be accessed at <http://istoe.com.br/o-brasil-sonhou-alto-e-atingiu-grandes-metas/>.

the LRT (Light Train Transit) tram came into the picture, connecting the central bus station, Santos Dumont airport and several metro stations. The city will inherit other benefits. After the Paralympic Games, on 7–18 September, part of the Olympic equipment will be disassembled to be employed in the city. The 1.18m square meter Olympic park area will be sliced into residential and commercial enterprises, training centers for high performance athletes and sports arenas.

The opening lines above (01–08) – by resorting to a motion picture camera technique –construct a narrative scene which establishes the general mood in the city, one of hectic enthusiasm, which extends across the country. This far-reaching excitement is soon put forward by three chronologically chained actions (a BRT bus approaches, fans celebrate the gold medal won by a Brazilian athlete, they board the comfortable vehicle and their continuous cheering produces a feeling of resentment in foreign passengers), which together negotiate scalar orientations concerning place and time. Not only does the storyline move from local rejoicing to national exultance but it also transits between different time periods, focusing on Rio before, during, and after the Olympic venue. Past and present are semiotized as opposite to each other. The former, constructed through an assemblage of signs associated with the idea of distress and inertia ("discontent", line 22; "paralyzed country", line 22; "forgotten sports", line 16), suggests a gloomy pre-Olympic stage to be overcome and "swept away" (line 21) in a post-Olympic context. A "luminous" present (line 20) and a joyful state of mind – indexed by different resources ("invigorating national pride", line 5; "happy", lines 4 and 18; "full of hope", line 18; and "revitalized self-esteem", line 21) – are already being experienced, though, by cariocas and many other Brazilians as the result of several improvements brought about by the government's infrastructure spending in the preparation of the mega-event. The BRT, the metro line and the LRT are mentioned as indisputable and "ubiquitous" symbols of evolution and well-being of millions of people and commuters who journey around, in and into the city every day. Moreover, besides the improvements already in place, the future holds further opportunities for development in the residential, commercial and sports sectors (lines 32–33).

The ideological framework sustaining such optimistic scenario of booming businesses fits well into the expansionist agenda of modernity whose guidelines equate technological prowess, structural advancement and economic growth with progress for all, an argument that seems to suffice as a criterion for positive evaluation. It is therefore through analogical, comparative and contrastive practices that local versions of the games are perspectivized, i.e. scaled, as having universal qualities and measures (big ones!) – a semiotic accomplishment erasing small-scale contingencies that might change or complicate the invoked scalar standards. Through this kind of ingenuous textual labor, in which controversies or tensions are deemed insignificant, a prototypical model is fashioned and made available to circulate widely as a stable entity.

Several examples of scaling rituals such as the one explored above can be found in many other media texts glorifying urban mobility and strong entrepreneurial orientation as indisputable signs of present and future prosperity. This kind of default rhetoric can be observed, for example, in the excerpt below which reconstructs part of an interview, carried out by BBC Brasil,[7] with Carlos Carvalho, a property developer who owned 10 million square meters of land in Barra da Tijuca, home of the Olympic Park, and invested heavily in the project *Ilha Pura* (Pure Island), which aimed at transforming the athletes' village into luxury housing after the games.

BBC Brasil – Interview with Carlos Carvalho

BBC Brasil – *One of the main controversies in the Olympic Games is its legacies within Rio. In your view which are the main benefits to be inherited by the people?*

Carvalho – *These Olympic Games are bringing the city to everyone, they're integrating Rio. The works will bring all of Baixada here, which will relieve the city. The legacy is huge. This privileged space is receiving the infrastructure that will allow ordered urban development, preventing people from suffering because of urban mistakes. I am convinced that a solution is being implemented, even if it is not the best one, no doubt it will alleviate 1.000% the suffering the people have been facing in the exercise of using the city. In Baixada Fluminense there are more than 6 million souls who take more than two hours to arrive here at Barra and now, with the BRT and the TransOlympic expressway, it's already possible to get here in 40 minutes. The games have created a legacy whose benefits will reach all, accomplishing something that the R$ 100 billion invested in the games could never do. There are the BRTs, the metro, and that will help organize the space over there (the South Zone). The Olympic games, and the way it arrived and was implemented here in Rio, was a gift from God who blessed the city. The games will give Rio that which it really represents in the national and international contexts (…) They (2016 Rio Committee and ICO) will use it (the athletes' village) and develop it after a year. From then on, the village will become apartments of different sizes, bigger and smaller ones. The area is the size of Ipanema (…) And we think that what we are doing qualifies as social work: we are being wise in the generation of comfort for those who can draw full benefit from it.*

7. The interview was published online on 10 August 2015 and can be accessed at <http://www.bbc.com/portuguese/noticias/2015/08/150809_construtora_olimpiada_jp>.

Otherwise, people just keep wishing and hoping, but never get anywhere. We have to transform that place into an enchanted space that makes many people improve their lives to enjoy it. Pure Island (Ilha Pura) will have the King's Garden (Jardim do Rei). Everyone will become king. We will create the infrastructure to build up a new city with satisfactory housing conditions for its residents.

Carvalho's answer to the interviewer's question illustrates a scalability project in the making, one that moves across scales as a uniform block, replicating the legacy discourse. By positioning Barra da Tijuca, and "the works" (line 06) being developed there, as standardized measurement against which regional, national and international contexts are to be evaluated, the entrepreneur carves the world around him asserting the enormity of the inheritance awaiting Rio ("the legacy is huge", line 07). His scalar exercise involves the assumed vantage point of the developer's expertise who is able to draw distinctions between a previous state of urban chaos – a result of "urban mistakes" (line 09) – and the present "ordered urban development" (line 08) which depicts Rio as a modern world site. Projecting himself as the city savior, he backs up his contrasting spatial-temporal construction by recycling the investment-on-mobility discourse (the BRT, the metro and the TransOlympic expressway); by appealing to the authority of quantification ("it will alleviate 1,000% the suffering the people have been facing", lines 11–12, and "accomplishing something that the R$ 100 billion invested in the games could never do", lines 16–17); and by invoking divine intervention ("a gift from God", line 19).

If the Olympic Games in Rio are scaled as a Heavenly act, able to bring a solution to "more than 6 million souls" (lines 12–13), Carvalho, as a visionary individual, also blesses the city with an exclusive venture ("Pure Island") that makes it possible for many people to "improve their lives to enjoy it" (lines 28–29). The latter, those who can pay for comfort, and "who can draw full benefit from it", (line 26) are thus likened to the aforementioned "souls" as residents who are beneficiaries of "social work" (line 25), in spite of the fact that just a few will "become king" (line 30).

In the above accounts, the same imperialist model, we would say, is instantiated by combining similar images, expressions, discourses and other semiotic elements. Together, they craft a form of life that claims being so sovereign, self-evident and transparent, that diverse productions are totally dismissed or made invisible. Such grandiose typifications, that render tokens completely insignificant, had previously oriented the production of many texts and discourses involving the preparation for other mega-events. In the 2014 World Cup in Brazil, for example, they were extensively exploited by the legacy rhetoric underlying the propagation / justification of the event and the expenditure on transportation, telecommunications and urban development. They were also alive and kicking at the time Russia was getting ready for the World Cup in 2018 and later when Japan was organizing the Olympics to be held in 2020. The strength of this scalable design is so great that it is still being considered, despite all evidence concerning the impossibility of holding large events during the current Covid-19 pandemic. The organizers in the Olympic Committee have been reluctant to postpone the games or even cancel them. They invoke a discourse about the monetary loss that would come with a cancellation versus the supposed benefits the tournament will bring to the host city. However, in spite of their insidious diffusion, there is always something rotten in the spread of models. They disseminate contagiously, troubling the imagined linear independent routes they are supposed to follow. The trail is full of crevices, detours, bumps, surprises and unexpected travelers that change the projected smooth itinerary and the social realities that may be engendered. In the next section, we will grapple with a model of imagining discourse circulation that stands in sharp contrast with the self-contained neoliberal narratives which have been our 'matter of concern' (Latour 2005) so far.

3. A contaminated response to monolithic models

On May 18, 2015, a class that one of us was teaching at the National Museum of the Federal University of Rio de Janeiro – a prestigious institution for the research in Anthropology and a middle-class space – had two invited lecturers: Mariluce Mariá and Kleber de Souza. Mariluce and Kleber, as they prefer to be called, are political activists from the Complexo do Alemão, a cluster of twelve favelas in Rio de Janeiro, where some 120,000 people live. In their intervention in the class, Mariluce and Kleber provided a narrative of how thousands of people from the Complexo do Alemão and they themselves survive in the context of "Police Pacification" in Rio de Janeiro. The UPPs – Unidades de Polícia Pacificadora, or Police Pacifying Units – are part of a strategy devised by Rio de Janeiro's government ahead of the mega-events, and were aimed at installing permanent police units and withdrawing weapons from the retail commerce of drugs in the favelas. In principle, the program was meant to implement practices of community policing, iterating the Latin American principle of 'citizen security.' Devised alongside the return to democracy in the subcontinent in the 1980s, citizen security is a philosophy that predicates policing and security in a democratic rather than authoritarian understanding of public security (Mesquita Neto 2011, Silva 2014). Nevertheless, as we will discuss below, the actual practice of the UPPs differs from its declared philosophy. First, in line with our discussion in Section 2, the scope of program coincides with infrastructural transformations in a stretch of Rio de Janeiro – known as the "security belt" around wealthy neighborhoods, real estate investments, and sports venues (Saborio 2013, Barreira 2013, *O Globo* 2011). Second, the practices of the UPPs rapidly incorporated understandings of the social space proper to the reasoning of the Brazilian elites. Based on a long history of urban segregation and authoritarianism, elite discourses have positioned the favelas as territories of crime that deserve not a Welfare State, but a Warfare State. Thus, in spite of the corporate media and their investors' acclamation of the UPPs as the solution for the historic problem of public security in Rio de Janeiro, this policing project has, since its creation in 2008, been rife with abuses and violence in peripheral territories (see Sussman 2015; Corrarino 2014; Facina 2014; Malaguti 2012).

The young couple has had to endure a military police force – the ostensible policing of streets in Brazil is still under military rule – that by and large has violated human rights in the Complexo do Alemão. The couple's narrative was being told to people who are positioned in a social and economic middle-class space that, in spite of its own disjunctions, differs from the lived realities of Kleber and Mariluce – neither the National Museum nor the neighborhoods where the authors of the present chapter live, are objects of "pacification." It is our point that the very fact that the activists strategically cooperate with "privileged" subjects to facilitate that their narratives reach other social arenas – not as monoliths but as metamorphosed narrative objects entangling their own struggle for survival with the mediators' interested agendas and institutional memberships – prevents them from presenting their rendition of the transformations in the city as an uniform block that "expands without rethinking basic elements" (Tsing 2012: 505).

How does one survive in a territory where the State, unlike what is the rule in middle-class and rich areas, makes itself present chiefly through its penal and police institutions? How do people make their discourses of resistance to violence – perpetrated by the State and by agents of the illegal commerce of drugs and weapons, as well as by the occasional entanglement of both – spread beyond their communities? These questions oriented our engagement with Mariluce and Kleber in the class at the National Museum. Additionally, such fundamental questions are leading our current analysis of *contamination* in the ways that Mariluce and Kleber imagine and regiment text and talk.

Essentially, Mariluce and Kleber use social media to communicate to other residents what is going on inside the favela. They originally created the Facebook page *Alemão Morro* to assist their small business of tourism in the favela and to announce local news and events to other residents. And yet, as shootings and other forms of violence have increased since the military occupation of the Complexo do Alemão in 2010 and the subsequent deployment of four Police Pacifying Units beginning in 2011, the webpage *Alemão Morro* became, in their words, a site of "virtual rockets."

Referring to the rockets that used to be fired in the favelas to announce a police incursion before "pacification," this trope is a metapragmatic resource indexing the communicability (Briggs 2007) of their social activism. Briggs suggests that narratives become communicable in their entanglement with meta-narratives that project trajectories of reception and invite people to occupy dimensions of social life in certain ways. His concept puns with the medical sense of 'communicable': one says that a disease is communicable when it is contagious. Briggs (2007) thus combines ideologies of communicability as "the ability to be readily communicated and understood" and the medical usages of the term referring to "microbes' capacity to spread." This metacommunicative concept suggests that "communicability is infectious – the way texts and the ideologies find audiences and locate them socially/politically" (Briggs 2007: 556).

To summarize a process that is far from linear, communicability involves four components: One, Briggs (ibid.) points out that this is a reflexive process of language use, "referring to socially situated constructions of communicative processes – ways in which people imagine the production, circulation, and reception of discourse.". Two, cartographies of communicability are "placed within what Bourdieu (1993) calls social fields, arenas of social organization that produce social roles, positions, agency, and social relations and that shape (without determining) how individuals and collectives are interpellated by and occupy them" (Briggs 2007: 556). Three, communicable cartographies are "chronotopes (Bakhtin 1981), which project discourse as emerging from particular places (clinics, laboratories, academic units, etc.), as traveling through particular sites (such as conferences, classrooms, newspapers, and the Internet) and activities (doing interviews, analyzing and publishing data, etc.) and as being received in others (coffeehouses, homes, cars, and offices)" (Briggs ibid.). Four, Briggs finally comments that as much as communicability is a "powerful" and "shaping" process, it is also "contestable". In his words: "in spite of their basis in material and institutional inequalities, communicable maps achieve effects as people respond to the ways that texts seek to interpellate them – including by refusing to locate themselves in the positions they offer, critically revising them, or rejecting them altogether" (Briggs 2007: 556).

We will borrow inferences from Briggs' cartographies of communicability and connect them with Tsing's (2012) theory of nonscalability to describe the three main features of Mariluce and Kleber's model of discourse contamination, namely infectiousness, transformative adaptation of basic design elements, and horizontal accessibility to communicative resources. The first feature of Mariluce and Kleber's model of discourse contamination is couched in the **infectiousness** of their virtual rocketing. Firing virtual rockets is a way of contaminating residents with guiding information on how to walk in the neighborhood in the wake of Police "Pacification." Mariluce explains this strategic use of the Internet in the following terms:

> Mariluce: We became the virtual rockets, I mean, 'There is shooting here, so go up through an alternate route', 'Don't go up here because there are shots', 'Be careful about this region'. We would always provide an option for people to go back home safely. This was our main concern. But then after the World Cup [June-July 2014], things got worse. I mean, we'd seen things getting bad since the beginning of 2014. In the beginning of 2014 things were still under control. But then it got out of control from April on. This was when Caio and Dona Dalva died. People became outraged, and there was also the death of a police officer, Alda, and the outrage about these deaths provoked a personal war between the police and the boys [drug dealers]. Then the governor signed a decree authorizing the cops to do extra hours in the pacified areas. Things got worse. When he signed the RAS,[8] then the Alemão became a no man's land, there are cops coming from everywhere.

As discussed in Section 2, infrastructural changes for the mega-events in the city were positioned in mediatized, real estate, and State discourses – which largely relied on a self-contained mode of discourse adaptation – as a necessity for Rio de Janeiro and for Brazil. Malaguti (2012) and Silva, Facina and Lopes (2015) have argued that the Program of "Police Pacification" is to a great extent a strategy that responded to investors and the media's demands for safety in Rio de Janeiro by militarizing peripheral territories around middle class neighborhoods, sports venues, and real estate enterprises. However, in invoking different dimensions of everyday life in the aftermath of "pacification," Mariluce presents an alternative cartography of discourse circulation and of strategies of survival.

Ordinary oppositions such as peace and violence, police and drug dealers, legality and illegality, which often appear in the upper classes' everyday talk and corporate media discourses to differentiate life in the wealthy and middle-class areas from the favelas, are undone in Mariluce's alternative invocations of such seemingly opposed terms. Contrary to the very trope animating police "pacification," in Mariluce's account violence rather than peace became more prominently a vector running through everyday life in the Complexo do Alemão. Thus instead of a *pacified* territory, which would be opposed to a previously *violent* territory,

8. In the RAS – Regime Adicional de Serviço or Additional Paid Session –, police officers from other battalions put in an extra work period elsewhere to increase their salaries.

one should rather look at this neighborhood as a *survival* territory, in which peace and violence are not opposed, but entangled with people's resistance to a State that presents itself mostly by means of its police force. In addition, the very legality of police action is questioned in her narrative: a legal act such as the additional paid employment offered to other police officers in the Alemão seems to exceed legality itself, turning the place into a *No man's land*.

At the same that it maps safety for an extended community of survival, Mariluce and Kleber's construction of discourse is oriented to 'contaminating' people situated in different localities. As indexed in many moments of the interview and in their interest in sharing their perspective with us, their communicable model of discourse circulation is meant to reach the world. Indeed, Mariluce and Kleber's active posting on Facebook about violence and social life has connected them with international correspondents in the U.S. and Japan. The visibility of their media activism also prompted an invitation from Stanford University. A few weeks before the interview, Mariluce had participated in a seminar at Stanford where she spoke about community leadership in Latin America.

The second aspect of discourse contamination in their political activism – namely its **transformative adaptation of basic design elements** – emerges out of the escalation of violence that Mariluce narrates in lines 217–228. Differently from a scalable project that expands without disturbing its original features, their Facebook page went from being a site where the couple imparted everyday information about the favela, to a site for launching "virtual rockets." As she had mentioned earlier in her talk: "In the past, people used to look at our page to see good things in the community." Yet, in 2015, the year between the World Cup and the Olympics in Rio, "children coming back from school look at our timeline, the elderly coming from the doctor look at our timeline, people coming back from work look at our timeline to see if there is any shooting going on; today is like this." Thus the transformative nature of their project is iconic of the transformations in the neighborhood ahead of the mega-events: as we have emphasized, in the face of the escalation of violence in the community, their aspiration has been to imagine the contamination of text and talk in ways that residents may shield themselves from violence.

In the excerpt above, Mariluce couples her depiction of the virtual rockets with a chronotopy (Bakhtin 1981; Blommaert 2015) of the intensification of violence in the Complexo do Alemão. She links the proximity of the World Cup – an event compressing certain time-space dimensions of the "world" into an specific stretch of Rio de Janeiro, namely its "security belt" – with the increase of vigilance and violations of human rights in the Complexo do Alemão, symbolizing a time-space that was left out, or yet in a secluded temporal space, of the self-contained project of the mega-events. In fact, the militarization of peripheral territories – intensified in Rio de Janeiro in the aftermath of the announcement of mega-events – is in itself a self-contained adaptation of military doctrines of handling poor territories around the Globe, from the United States military operations in places such as Iraq and Afghanistan, to the barrios in Colombia, to the Brazilian Army presence in Haiti (see Penglase 2014; Malaguti 2012).[9] Thus, in response to this scalable model of handling poverty, Mariluce and Kleber have premised their political activism on transformative nonscalability – that is, the transformation and indeterminacy yielded in encounters with different others, a basic characteristic of (bio)diversity (Tsing 2012: 509–510).

The third aspect of Mariluce and Kleber's model of discourse contamination – namely, **horizontal accessibility to communicative resources** – is lodged on the recognition of the vulnerability of residents and on the cooperative pursuit of linguistic resources. In other words, the realization that residents are left in a vulnerable position in the topography of power in the Complexo do Alemão is one of the main driving forces in Mariluce and Kleber's aspirations for pursuing and sharing resources. In talking about a social space where conflicts and arrangements between the State and the retail commerce of drugs, or legality and illegality, is more ostensive than other areas in the city, Kleber correlates the distribution of resources in the Complexo do Alemão with the possession of war ammunition. In his account, both police officers and the 'boys' [drug dealers] – icons of two major forces in the territory, namely the State and the retail commerce of drugs – have their ammunition and war strategies. As Kleber put it: "The dealer has guerrilla resources, he is trained, he can go to places and fire shots. (…) The police can too! They have agents, spies, P2 etc." However, as they both point out, residents lack these belligerent resources: "Both of them [the police and the boys] can run away, but we just can't," is how Mariluce reframes Kleber's realization of the residents' vulnerable positionality in the conflict of forces in the favela. Thus, the horizontal metapragmatic work that Mariluce and Kleber envisage is a way of grappling with an unequal indexical order, that is, an order that projects "minute linguistic

9. Militarization is "a term used by anthropologists and other critical scholars to describe the diffusion of a military mindset and military practices to other spheres of society" (Savell 2014). The militarization of favelas in Rio de Janeiro – as well as the recent militarization of Brazilian cities such as Vitoria, Rio de Janeiro and Brasília, which were occupied by the Army in 2017 in the aftermath of the crisis of credibility of Brazil's federal government and the economic collapse affecting states that have not been able to pay the wages of their police forces – importantly indexes the intertwinement of scalability and nonscalability in processes of textual, social, and environmental adaptation. As regards militarization, even if its basic framework – "diffusion of a military mindset (…) to other spheres of society" – grows from militarized zones such as Iraq to urban spaces such as Ferguson, USA, Bogotá, Colombia, and Rio de Janeiro, the diversity and (often nonscalable) social confrontation in these urban spaces provokes crucial changes and disruptions in scalable ambitions. Ultimately, the aspirations of counterhegemonic practices such as Black Lives Matter and the activism of Mariluce and Kleber – iconic of other practices in the streets and social media in Brazil – may signal alternative and productive forms of social attachment and group formation.

differences onto stratified patterns of social, cultural and political value-attribution" (Blommaert 2010: 5). In the face of the ordered and stratified seclusion of residents of the peripheries of Rio de Janeiro, these activists frame their engagement with social media, other digital technologies of communication, and the solidary work with other agents, as resources for survival, that is, for the horizontal imagination of a community that survives State seclusion and militarization.

The following excerpt in the narrative is illustrative of the intertwinement between the infectiousness, transformative adaptation, and horizontal accessibility of resources in discourse contamination. Kleber begins this stretch of interaction by making a connection between the semiotized dimensions of the World Cup and those of the neighborhood:

Kleber: Before the World Cup, in the beginning, we knew that Rio de
Janeiro would host a very important event, we knew that the
world would turn the eyes to Rio, so the dudes [cops] would
need to do this cleaning up. I mean, in their minds, right?

Mariluce: And they used to tell us: 'You guys have a tourism company.
Instead of posting things related to tourism, you post things
against the Police!' Then I replied: 'Dear, do you think I'm
concerned about tourism? If I have to sacrifice my work just so
I don't see anyone die, I will starve to death, because I won't
work with tourism anymore'.

Facina: What kind of tourism is possible in a place like this? If the
Police are invading everything?

Mariluce: There's no way.

Kleber: And she mentioned something nice here, the virtual rockets. In
the favela, the traffic used to wait for a potential police
incursion, so they would fire rockets, right? And then people
would run back to their homes. And the bandits would run
towards the Police just so the cops wouldn't be able to enter.
So, when people were in Grota and saw the fires, they knew they
shouldn't stay there. No one would go to Grota. But now as the
Police are there all the time, there are not fireworks anymore,
the Police are there with everyone.

Mariluce: Otherwise there would be fires everywhere. People would be like
dizzy cockroaches, spinning around.

Kleber: So the only resource that we found was this, the warning, the
virtual rockets, the Facebook. And we use it in a very
characteristic way. (…) People say that they've been saved by
this, that they don't leave home, or that they avoid a certain
area. Once we began a twitterstorm, and we reached 7 million
people. In the whole world.

In this excerpt, both Mariluce and Kleber point out that, in imagining the infectious spread of discourse, they are mostly concerned with the vulnerable residents. In line 274–277, Mariluce responds to a police officer's apparent suggestion that she should abandon her postings about the police to prioritize her tourism business (which may sound as a threat) by saying that she will "sacrifice [her] work just so [she does not] see anyone die." Kleber's interventions in lines 268–271 and 281–289 also point to a primary commitment with the wellbeing of their fellow neighbors. Indeed, in the whole interview, the horizontal imagination of a community of survival seems to orient the contamination of text and talk in Mariluce and Kleber's activism.

In lines 292–293, Kleber underlines that "the only resource" that he found in the midst of the unofficial war between the State and traffic was Facebook. In their social media activism, the regulation of accessibility is from the outset nonscalable – that is, adaptive to transformations across encounters. For instance, in other instances of the interaction, they claimed that every person who wants to post on their page must speak for him/herself. By saying this, they mean that it is not their aspiration to project a bounded, self-contained model of language in which words must be uttered according to a pre-fabricated model. That people are allowed to speak for themselves, using their own personal styles, amounts to placing diversity at the basis of one's transformative mode of making discourse circulate. Diversity, Tsing (2012: 507) tells us, is the enemy of scalability: "Scalability is possible only if project elements do not form transformative relationships that might change the project as elements are added. But transformative relationships are the medium for the emergence of diversity. Scalability projects banish meaningful diversity, which is to say, diversity that might change things." In line with contemporary claims of minorities of having a say in social processes, Mariluce and Kleber thus place issues of voice and diversity at the center of their nonscalabe model of discourse (see also Tsing 2015: 38–39).

It is our point that in order to cope with the imagination of language circulation in Mariluce and Kleber's activism, we should approach their semiotic work not as a bounded participation in a local village, but as a trans-contextual and cooperative struggle for symbolic resources. While using technologies of digital communication like Facebook and Twitter, enregistering local terms, and collaborating with journalists and scholars around the world, they resist a powerful meta-narrative of self-containment that is expressed in their territory mostly by the militarized strategy of handling poverty in the contemporary world. Their *modus operandi* has inspired us, as researchers, to follow a similar pathway, avoiding the temptation to produce self-contained storylines with totalizing ambitions. Therefore, in the next section we take a cautious stand in sketching a provisional frame that can bind together the different paths we have explored.

4. By way of engaging with the projected network

In our musings on discourse adaptation we have circulated along varied tracks. We started out by considering major mega-events taking place in Brazil (the World Cup and the Olympic Games), making them temporarily our object of concern. As such, we explored for a while the general communication regime, orienting talk about politics and talk about sporting events, capturing their similar ways with signs – as both deploying semiotic resources projecting an expansionist mode of circulation in which they would propagate without being transformed. We proceeded by producing associations which led us to take other roads and detours. We evoked a now long-standing experience of political mayhem involving the presidency of Brazil in the past few years, which culminated in a *coup d'état*. Then, moving between different space-time scales, we established connections between the crisis in politics and the economic turmoil affecting not only Brazil, but also other countries in South America and nations worldwide. We related such instability to a globalized neoliberal agenda, approaching it as another amplifying, non-adaptable discourse, traveling everywhere, while maintaining an inert quality.

Going along another aisle, we drew on Anna Tsing's (2012, 2015) discussion on self-containment and contamination, which she characterized as possible scalar models propelling discourse toward two entangled tracks. One that magnifies, stabilizes and spreads – i.e. it is scalable; the other – nonscalable – that individualizes, remodels and moves more locally. We followed her in her argument for the non-polarization of scalability and nonscalability. Tsing's position juxtaposes two metaphors taken from the botanical area to illustrate ways of existing-in-motion: the sugar cane plantation and the matsutake mushrooms – wild plants inhabiting forests troubled by human activities. The former proliferated in the colonial period, disturbing and devastating native flora in the Americas. The latter, said to be "the first living thing to emerge from the blasted landscape" (2015: 3) after Hiroshima was destroyed, live and survive in precarious conditions, nurturing from trees and other surrounding organisms. However opposed they may seem to be, as forms of life based on growing by erasing diversity (i.e., scalable theory) they also rely on transformative relations and their resulting indeterminacy (i.e., nonscalable theory) (see Tsing 2012: 506). In our chain of connections, we found in Tsing's analogy a fruitful way to articulate nonscalable elements – such as the narratives of survival offered by Mariluce and Kleber, that are produced out of the ruins of scalable projects of economic seclusion and militarization of poverty, and the narrative of the matsutake mushrooms that, born in forests mutilated by scalable monoculture plantations, interact with scalable units. That imagery helped us fathom how "nonscalability theory makes it possible to see how scalability uses articulations with nonscalable forms even as it denies or erases them" (Tsing 2015: 506). Moreover, the metaphorical frame associated with Brigg's (2007) notion of communicability enabled us to zoom in and out on specific sociocultural texts (both written and spoken), while observing their communicable cartographies. In so doing, we mapped out the co-existence of distinct possibilities of infectious itineraries, nonadaptation vs. transformative adaptation, and generalizing vs. individualizing positions. In the projected territory, hierarchical and horizontal meanings and relationships dovetailed, orienting to different communicable models of discourse circulation.

Crafting such a topography required our wandering along a "trail of associations" (Latour 2005: 5) which interlaced political discourse, economic interests, urban planning, real estate development, systems of governance, neoliberal ideologies, a colonialist-modernist episteme, and practices of resistance. The net of references is potentially infinite and could be further multiplied into a web that could only be partially be explored; losing our focus was a risk we ran. However, the pursuit of a 'methodological design', so to speak, made it possible for us to arrange heterogeneous elements into a complex and nuanced mosaic, whose intricacy prevented us from producing either stability or centrality, its meaning lying in the overall aggregation effect rather than in isolated aspects; and the question is: What do the chained combinations indicate? In retrospect, having described how we have brought together several components and forged an understanding of how they hold together, we can now put forward a temporary meta-narrative.

5. The monolith is 'out of joint'

Our story on discourse circulation braided an intricate moving network in which the exceptional scale of major ventures like the Olympic Games and the World Cup joined new combinations and perspectives. Our scale efforts, intertwining different strategies – proliferating, wide-screening, zooming, embedding, localizing, and so on – produced a movement that perturbed the iteration of the mega-events monolith's ideas and reshuffled its communicative boundaries. Although the monolithic models at hand expand in many directions, their trajectory in Brazil was traversed by chance events which altered their 'prospected' effects and triggered multiple adaptation and accommodation practices. Therefore, we would like to argue that if monoliths bypass transformative relations, they become crippled, i.e. imperceptible to multiplicity, as they interrupt the flux of discourse modulation. Yet, our study has also shown that, in spite of this disjointed and limiting aspect, monoliths circulate while being interpellated by other models that potentially challenge or complicate their spread. This kind of frictional, and nonscalable, encounter may generate conjoint, diverse perspectives on social events, interweaving grand narratives – of which ICO's is an eloquent example – and small narratives – such as the ones told by Mariluce and Kleber. According to Tsing (2015), the very possibility of existence depends on this kind of mutuality, in which differences and interchanges proliferate.

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CHAPTER 7

Quotation, meta-data and transparency of sources in mediated political discourse

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Quotation has been defined as metarepresentation, metarepresenting not only the pragmatic force and content of a conversational contribution, but also its source and contextual coordinates. It thus displays a higher degree of explicitness than does the original contribution, as is reflected in explicit metadata which contribute to the contextualisation of the original participation format, the participants' communicative intentions, communicative goals and intended perlocutionary effects, as well as physical, temporal and discursive setting. The chapter suggests that participants adapt the formatting of their quotations and the entextualisation of metadata to the contextual constraints and requirements of the quoting discourse. In mediated political discourse quotations and metadata are used strategically to (1) intensify the force of a contribution, (2) demonstrate argumentative (non)coherence and (non)credibility, (3) express (non) alignment, and (4) secure discourse common ground between multilayered and multifaceted audiences. On a more global level, quotations contribute to the construal of interdiscursitivity.

Keywords: context, metadata, perlocutionary effect, political discourse, quotation

1. Introduction

In natural language communication, participants anchor their conversational contributions to local context, the here-and-now, as well as to more remote layers of context. Because of its multilayeredness, local context is embedded in less local layers of context which are embedded in more global layers of context comprising social and sociocultural contexts, linguistic contexts and cognitive contexts (cf. Fetzer 2012). In communication, participants anchor their contributions to multiple layers of context, to which they may refer in more or less explicit ways. At the same time, they may also import context into an ongoing discourse, as has been

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shown with the strategic importation of context indexed by the deictic expressions *here* and *there* in political discourse (Fetzer 2011). Context may also be imported with more determinate linguistic material, for instance direct quotations, indirect quotations, focussing quotations,[1] mixed quotations, and mixed types of quotation (Fetzer 2015, 2020). Direct quotation (or direct speech-report) is defined as a verbatim representation of what has been said before, for instance "I'm disabled and I live in constant fear of my benefits being reassessed and stopped…and being forced onto the streets", quoted by the former leader of the Opposition and former leader of the British Labour Party, Jeremy Corbyn (2015–2020) from a letter from Adrian, an ordinary citizen, in Prime Minister's Questions (PMQs) on 23 March 2016. Indirect quotation (or indirect speech report) is a more subjectively coloured version of direct quotation; it represents what has been said before, accommodating deictic and temporal shifts as well as the quoter's[2] interpretation of the contribution's pragmatic force. If the direct quotation above is formatted as an indirect quotation, it reads as follows: Jeremy Corbyn quoted from a letter from Adrian, who wrote that he was disabled and that he lived in constant fear of his benefits being reassessed and stopped… and being forced onto the streets. Focussing quotations exploit the linguistic formatting of direct quotation and adapt the linguistic representation of the quotative to the question-and-response sequence of PMQs. Its quotative is metarepresented with a pseudo-cleft-like focussing construction, which foregrounds the quoted. For our example, it reads as: And this is what Adrian wrote: "I'm disabled and I live in constant fear of my benefits being reassessed and stopped…and being forced onto the streets". Like direct quotation, focussing quotation is generally considered to display a lower degree of subjectivity, since it metarepresents the quoted and quotative as closely as possible to the original verbatim representation. Mixed quotation comprises components of direct and indirect quotation, for our example it reads as Jeremy Corbyn quoted from a letter from Adrian, who wrote that he was disabled and that he lived "in constant fear" of his benefits being reassessed and stopped… and "being forced onto the streets". The mixed type of quotation, which is also referred to as free indirect speech, does not accommodate the necessary deictic and temporal shifts required for a quotation to count as an indirect quotation; for our example it would read: Jeremy Corbyn quoted from a letter from Adrian, who wrote that I'm disabled and I live in constant fear of my benefits being reassessed

1. In Fetzer (2015) focussing quotation is referred to as 'parasitic' quotation.

2. In this contribution, *quoter* refers to the participant who undertakes the communicative act of quoting, *quoted* refers to the conversational contribution(s) which the quoter quotes, *source* refers to the original producer of the quoted excerpt, and *quotative* refers verb of communication which introduces the quoted excerpt. *Quotation* is used as an umbrella term comprising the constitutive parts of the communicative act, i.e. quoter, source, quoted and quotative.

and stopped… and being forced onto the streets. As has surfaced in the discussion of different kinds of quotation, the linguistic formatting of quotations is adapted not only to the quoter's communicative intention, communicative goal and their discursive resources, but also to the quoting text. Their plasticity is reflected not only in the different formattings utilized in and across different discourse genres.[3] Quotations also tend to contain more linguistic material and they are generally more determinate as regards their semantics. From a discursive viewpoint, however, quotations do not only import linguistic context into an ongoing discourse, but also social and sociocultural context in which the imported stretch of linguistic context has been embedded.

Quotation has been defined as a kind of metarepresentation, making explicit not only the quoted, that is the conversational contribution or discursive excerpt, which has been said/written before, and its discursively contextualised illocutionary force, but also contextual coordinates, that is participation format and physical, temporal and discursive setting, which may have been implicit in the original production. Quotation thus displays a higher degree of explicitness with respect to the original participation format and physical, temporal and discursive setting, communicative goal of the quoter and her/his intended perlocutionary effects, which are adapted to the contextual constraints and requirements of the quoting discourse. Furthermore, the fact that a discursive excerpt is quoted assigns that piece of discourse the status of quotability (Clayman 1995) or quote-worthiness (Fetzer 2015).

The communicative function of a quotation depends on the quoted and its source, the quoter and her/his attitude towards source and quoted, its discursive context, and the contextual constraints and requirements of the quoting discourse: "Paper-based citations attempt to keep the reader within the article, while providing the address of where the source material resides for the highly motivated researcher, On the net, hyperlinks are less nails than invitations. (…). They beckon the reader out of the article" (Weinberger 2011: 113). That particular function of beckoning a reader out of an article, I claim in the present chapter, also holds for mediated political discourse. However, unlike beckoning an addressee and an audience out of a political discourse to obtain more information about a topic or participant, the strategic use of quotation in mediated political discourse is adapted to its contextual constraints and requirements, and particularised to the contextual constraints and requirements of a discourse genre, for instance political interview, political speech or Prime Minister's Questions. Quotations thus demonstrate the plasticity of form-meaning mappings, while their strategic use in discourse shows

3. In this chapter discourse genre is used as an umbrella term, containing the functional synonyms of communicative genre (Luckmann 1995), activity type (Levinson 1979), macro speech act (van Dijk 1980), and macro validity claim (Fetzer 2000), to name but the most prominent ones.

the plasticity of the interdependence of form, meaning, communicative intention and communicative goal.

The current chapter analyses the forms and functions of quotations in the context of mediated political discourse and gives particular consideration to the entextualisation of different kinds of metadata and to the transparency of sources. To capture the inherent dynamics of mediated and mediatised political discourse, the analysis of quoting accounts for illocutionary acts, higher-level illocutionary acts, speaker-intended perlocutionary effects and for particularities in linguistic formatting. It shows that quotations and metadata are used strategically to achieve the following goals: (1) intensify the force of a contribution, (2) demonstrate ideological coherence/non-coherence of self or other in order to target the credibility of self or other, and (3) express alignment. On a more global level, quotations contribute to the construal of interdiscursitivity, beckoning addressees out of a discourse into a more or less specified prior discourse, which is assigned the status of being quote-worthy and thus relevant to the present discourse, and beckoning addressees back in again, pointing at (in)congruencies in the current agenda as regards policies, political agents or political positions, and commenting on them more or less explicitly.

The research design is based on the premise that mediated political discourse shares the fundamental premises of natural-language communication, which do not only hold for natural language communication and political discourse as a whole, but also for their constitutive parts, that is, the meso unit of discourse genre and for its constitutive communicative acts, for instance assertion, rejection, request or quotation. In mediated political discourse, the present contribution argues, those generalised (or default) constraints may undergo context-sensitive particularisation. The chapter thus subscribes to methodological compositionality, accommodating the fundamental premises of pragmatics – particularly rationality, cooperation and intentionality of communicative action (Brown and Levinson 1987; Grice 1975; Searle 1969, 1995) – and interactional sociolinguistics – in particular the indexicality of communicative action, conversational inference, language as socially situated form, and linguistic variation, i.e. variations and alterations are not random or arbitrary, but communicatively functional and meaningful (Gumperz 1992). The main bridging points between pragmatics and interactional sociolinguistics lie in the explicit accommodation of context as a complex and dynamic whole. For the discourse domain of political discourse, both the dynamics of context and the complexity of participation are of key importance. Conceiving of participants as rational agents who direct their conversational contributions intentionally towards a ratified set of addressees further refines the analytic framework by providing a set of methodological tools which allow for the analysis of meaning production and meaning interpretation in context.

The chapter is organised as follows: The next Section 2, *quotation: theory and practice*, analyses and discusses quotation in linguistics, pragmatics and discourse analysis, considering in particular their status as higher-level speech acts in discourse and their discursive functions. Section 3, *quotation and metadata in mediated political discourse*, adapts the results obtained to the contextual constraints and requirements of the discourse genres of political interview, Prime Minister's Questions and political speech. Section 4 concludes.

2. Quotation: Theory and practice

Quotation has been examined in the field of linguistics, pragmatics, discourse analysis and conversation analysis across various languages, contexts and cultures. In pragmatics and metapragmatics, quotation has been distinguished with regard to use and mention; it is generally classified as an instance of mention and thus as a special form of metarepresentation, comprising metalinguistic (pure) quotation and reported speech, i.e. direct and indirect speech (cf. Breidel, Meibauer, & Steinbach 2011: 1), and as a mixed type of quotation, that is, as free indirect speech. From a context-based perspective, quotations are of interest because the indexicals used in a quotation cannot be bound by the reporting – or the actual – context. Consequently, it is not only indirect quotation and free indirect speech which are referentially opaque, but also direct quotation. To make indirect speech grammatically well-formed, special grammatical means, viz. backshift of tense and indexical shift, are required. This also applies to the formatting of indirect thought and belief reports. Other, less frequent forms of quotation are emphatic quotations or 'greengrocer quotations', for instance We sell "fresh" milk, foregrounding and thus emphasising the freshness of the dairy product by implicitly contrasting it with a set of non-fresh milk sold in other stores, and scare quotations, in which the quoted expression is a semantic and syntactic part of the utterance, e.g. "What does the Prime Minister want to do to 'recoup that money' for the consumer?" (PMQs, Edward Miliband 23 October 2013). With scare quotations, the quoter may express a kind of detachment from the quoted, querying its appropriateness, if not its validity. From a form-based perspective, both emphatic quotation and scare quotation are constitutive parts of the conversational contribution, and both require the contextualisation and possibly recontextualisation of the quoted ("fresh" in the emphatic quotation and "recoup that money" in the scare quotation). In the former, something is foregrounded which is generally taken for granted in that scenario, and in the latter, the quoter recycles a particular formulation and assigns it the status of an object of talk. Because of their status as quotation, the interpretation of emphatic quotation and scare quotation requires pragmatic enrichment and thus the explicit accommodation of context. In discourse analysis and conversation analysis, quotation is further classified as self-quotation with self fulfilling a dual function of source and quoter, and other-quotation with non-identical quoter and source, accounting for the participation framework.

Quotations are a ubiquitous phenomenon in discourse, especially in mediated discourse. They occur in various types of discourse across different contexts and with different degrees of formality, for instance academic discourse, legal discourse, in particular cross-examination, mediated monologic and dialogic political discourse, but also in mundane everyday communication, especially personal narratives. Since the validity of a conversational contribution is one of the objects of discourse in these discourse types, quotations have become a constitutive part of the discourse.

Quoting in discourse is communicative action, but communicative action of a particular kind. Quotation is composed of one or more speech acts which have been produced before and which were then considered felicitous. In other words, quotation discursively contextualises the content and force of felicitous speech acts, and thus is different from ordinary speech acts, as are expositives (Austin 1975), which have been described as a higher-level illocutionary act type (Oishi & Fetzer 2016): "[T]he expositive is the clarifying of reasons, arguments, and communications" (Austin 1975: 163). Possible realisations of expositives are 'I turn next to', 'I quote', 'I cite' or 'I illustrate'. Expositives are different from classical speech acts, because the conventional illocutionary effect brought about by an expositive is not a change in the world, described as a proposition, but rather a speaker comment on how s/he intends the speech act to be taken: "In performing an expositive illocutionary act, the speaker makes manifest how illocutionary force and locutionary meaning are intended to be contextualised discursively in context C, at a particular stage in discourse. In doing so, the speaker as the addresser of the illocutionary act makes manifest her perlocutionary intention of producing a perlocutionary object or sequel" (Oishi & Fetzer 2016: 54). When quoting, the quoter invites the addressees to consider the felicity conditions of the quoted as well as its communicative status in a different discursive context and thus re-consider the validity of the conditions in the quoting context. This may require the (re)contextualising of content or force, or of both.

As for Jeremy Corbyn's quotation, discussed in the introduction, the higher-level illocutionary type of quotation is introduced by the quoter making explicit the imported discursive context ('a letter') and its temporal contextual coordinates ('last week'), the source ('Adrian') as well as the quotative ('wrote') by saying "Last week, I received a letter from Adrian. He wrote: 'I'm disabled and I live in constant fear of my benefits being reassessed and stopped… and being forced onto the streets'. Will the Prime Minister do what the Chancellor failed to do yesterday, and apologise to those who went through such anguish and upset while there was a threat of cuts to their personal independence payments?" (PMQs, Jeremy Corbyn 23 March

2016). In this excerpt, the quoter does not only make explicit relevant contextual and discursive coordinates but also his[4] perlocutionary intention, that is, the Prime Minister should apologise and thereby admit that he has caused (allegedly unnecessary) anguish. By assigning the quoter's intended perlocutionary effect the status of an object of talk, he invites the addressees, in that case the members of the House of Commons, including the Prime Minister, and the media audience (and possible future audiences, should his quotation be followed up in different media) to re-consider the Prime Minister's performance and that of his Chancellor. Expositives inform the addressees how contributions are intended to be connected with local linguistic context, and how the addresser intends them to be contextualised discursively. In that respect, they could be assigned the function of some kind of indirect directive, informing the addressee about local discourse expectations and requesting her/him to perform the corresponding inferences and update her/his discourse common ground (Fetzer 2007) accordingly: "Many implicatures are generated by such *discourse expectations* [original emphasis]" (Thomason 1992: 355).

The higher-level illocutionary act of quotation imports context into a (different) discourse and does not only assign it the status of an object of talk, but also indicates that the quotation is relevant to a particular communicative goal at that particular stage in discourse. It may be its content, which is considered to be 'quotable' (Clayman 1995), or it may be the source with which a quoter intends to align or disalign. However, there is more to the communicative act of quoting than the importation of discursive content. Quotations also fulfil an important interpersonal function by relating quoter, quoted and source with other participants of a communicative exchange, for instance direct addressees, readers or media audiences; they relate discourses and contribute to the construal of local coherence, global coherence and interdiscursitivity. The relational nature of quotation holds for all types of quotation, irrespective of their formatting as direct, indirect, focussing, mixed or mixed type of quotation, irrespective of their source.

2.1 Linguistic formatting

In linguistics and studies of grammar, quotation is differentiated as a direct type of quotation (or: direct speech), an indirect type of quotation (or: indirect/reported speech), a mixed type of quotation (or: free indirect speech/discourse or represented discourse), a hybrid form of mixed quotation, or a focussing kind of quotation (cf. Fetzer 2020). All of these types refer to one or more original utterances or their parts, and they 'repeat' and 'mention' these excerpts in another context, e.g.

4. In this chapter, the use of personal pronouns is in accordance with sociocultural gender.

as direct quotation, as when the Prime Minister said: “There are always lessons to be learned and I will make sure they are learned” (PMQs 6 January 2016). When formatted as an indirect quotation, the quotation needs to accommodate temporal and deictic shifts to mark the transition from one context to another, as well as the quoter’s interpretation of the source’s illocutionary force, formatted as the neutral quotative ‘say’ in our example: ‘the Prime Minister said that there were always lessons to be learned and he would make sure they were learned’. Alternatively, the original illocutionary force can be formatted as a more particularised quotative, such as ‘remind’, ‘criticise’ or ‘promise’; indirect quotations thus contain some degree of subjectivity. This also applies to mixed quotation, which represents a hybrid kind, composed of both direct and indirect quotations, e.g., ‘the Prime Minister said that there ‘are always lessons to be learned’ and that he would make sure they are learned.’ The mixed type of quotation does not accommodate any deictic and temporal shifts and thereby indicates its relevance to the quoting discourse, for instance: ‘The Prime Minister said that there are always lessons to be learned and that I will make sure they are learned’. The focussing kind of quotation is similar to a direct quotation, but it exploits the importation of discursive context by a cataphoric reference to the quotation, usually with the proximity-coloured demonstrative ‘this’, thus foregrounding the quoted: ‘and this is what the Prime Minister said “There are always lessons to be learned and I will make sure they are learned”’.

More recently, the linguistic forms used to introduce a quotation, viz. quotatives, have been under investigation. Quotatives entextualise[5] the quoter’s interpretation of the original illocutionary force of the conversational contribution and thereby contribute to the subjectification of indirect quotation; the quoter may attempt to neutralise the degree of subjectification with the selection of generic verbs of communication, but s/he may also intensify the degree of subjectification by opting for particularised verbs of communication, e.g., blame, question, or stutter. Quotatives, such as ‘I say’, ‘she goes’ and ‘I’m like and she’s like’, are frequently found not only in mundane everyday communication, but also in mediated political discourse. In the latter, however, the use of quotatives is more constrained and often restricted to more neutral variants adopted from generic verbs of communication, such as ‘say’ or ‘write’, again demonstrating the adaptability of form-, meaning-,

5. The use of ‘entextualisation’ in this contribution differs from the one promoted by Park and Bucholtz (2009), who define entextualisation primarily in terms of institutional control and ideology. Entextualisation refers to participants assigning an unbounded referential domain/ an unbounded event the status of a bounded referential domain/bounded event. It shares their stance of approaching entextualisation in terms of “conditions inherent in the transposition of discourse from one context into another” (2009: 489), while considering both local and global contexts.

communicative-intention and communicative-goal mappings. Quotatives frequently utilise "lexical items that denote comparison, similarity or approximation" (Buchstaller & Van Alphen 2012: xiv), such as 'like' or 'something like', as in 'and then she went like this …' 'and I'm like …' or 'and I'm all …', for instance. Buchstaller and Van Alpen (2012: xv) explicitly connect the approximation-loaded semantics of the quotatives (e.g., 'like', 'something like') with their communicative function: "By using lexical material with comparative/similar semantics (…), speakers acknowledge and even highlight the approximate value of the quotation and thereby shield themselves from potential criticism regarding the inexact nature of the reproduction (…). The epistemic hedging function of these types of quotatives has been pointed out by a range of scholars." However, it is not only their inherent vagueness, which make lexical items qualify as quotatives, but also their demonstrative function: "The second major source of innovative quotative forms is lexical items that have demonstrative or deictic function. (…) the deictic pointing effect of these lexemes thus focuses the hearer's attention onto the quotation and allows the performative aspects of the enactment to take center stage"[6] (Buchstaller & Van Alphen 2012: xv). Quotatives are also adopted from the domain of quantification (e.g., 'all'); like deictics and demonstratives, they have a foregrounding function: "The third source for new quotatives involves elements that have quantificational semantics; (…) at either ends of the scale …" (Buchstaller & Van Alphen 2012: xvi). The fourth source is "generic verbs of motion and action" (Buchstaller & Van Alphen 2012: xvi) (e.g., 'say', 'go'), and "equation", and "markers of focus and presentation" (Buchstaller & Van Alphen 2012: xix).

2.2 Functions

Quotations have been classified as direct quotation, indirect quotation, focussing quotation, mixed quotation, and mixed type of quotation, and all of these forms may be further distinguished with respect to participation, that is self- and other-quotation. Quotations display anaphoric reference to some prior discourse or sometimes a prior stretch of the same discourse, recycling specific discursive excerpts and following up on them with respect to their validity and relevance to a current stage in discourse. But why do participants not use their own formulations to realise particular goals in discourse, why do they opt for quotations?

6. In the political-discourse data, the quotative 'say' and 's/he says' frequently co-occur with the demonstrative 'this'. These patterned co-occurrences are called 'focussing quotation', as noted earlier in footnote 1.

Direct quotation is defined as a verbatim speech/attitude-report of something, which has been said/written before. Since direct quotation represents a discursive excerpt in a verbatim manner, it has generally been considered as non-evaluative, representing things as they are. However, to count as non-evaluative, direct quotation would require a full set of features of resemblance with its original representation (cf. Brendel, Meibauer, & Steinbach 2011), which seems problematic (cf. Fetzer & Weiss 2020). The following direct quotation is from PMQs (06 January 2016). The then leader of the Opposition, Jeremy Corbyn, uses a direct other-quotation, quoting the Prime Minister. "Two years ago, in January 2014, following devastating floods, the Prime Minister said: "There are always lessons to be learned and I will make sure they are learned." Were they?" The direct formatting of the opponent's prior contribution assigns it the status of being quote-worthy and relevant to the here-and-now, but only to deconstruct the opponent's argumentative coherence and credibility. The deconstruction is supported by mentioning source, temporal embeddedness ('Two years ago, in January 2014'), and the quote-worthy event ('devastating floods').

The lower degree of subjectivity also holds for focussing quotations, in which the verbatim speech-report is introduced with a focussing formula composed of a demonstrative ('this'), a preemptive pronoun ('what'), a reference to source and a quotative, as is the case with the following excerpt from PMQs (14 October 2015) with the then leader of the Opposition, Jeremy Corbyn, self-quoting a prior contribution of the exchange: "The question I put to the Prime Minister was this: what is he doing to allow local authorities to build the homes that are necessary for people who have no opportunity to buy and who cannot afford to remain in the private rented sector? I realise that this might be complicated, so I would be very happy for him to write to me about it. We could then share the letter with others." Formatting a self-quotation as a focussing quotation and mentioning the quotative explicitly foregrounds the quoted and quotative, which in the context of the leader of the Opposition asking questions to the Prime Minister thereby making him accountable to Parliament and to the general public (cf. Fetzer & Weizman 2018) implies that the Prime Minister has neither addressed the foregrounded quotative, the question, nor the foregrounded quoted, the content, in an appropriate manner. The challenge is intensified with Corbyn's metacomment ('I realise that this may be complicated'), offering a face-saving solution ('I would be very happy for him to write me (…) a letter …'), which may at the same time count as a strong face-threatening act, should the letter to the public not materialise.

Indirect quotation, by contrast, is defined as a reference to some prior speech/attitude-report which is presented and evaluated from the quoter's perspective, as is reflected in deictic and temporal shifts as well as in the quoter's interpretation of the source's illocutionary force entextualised in the quotative. In the following extract from PMQs (06 November 2013), the then leader of the Opposition, Edward

Miliband, formats his other-quotation of the Prime Minister as an indirect quotation: “He promised he would protect the NHS the National Health Service, but it is now clear that the NHS is not safe in his hands”. The indirect format allows the quoter to make explicit his interpretation of the quotative, in this case the act of promising. The entextualisation of this kind of metadata with reference to a past event carries the implication that the Prime Minister had promised to protect the NHS, but has not kept his promise. This is further strengthened with the mentioning of the quoter’s intended perlocutionary effect, namely that the NHS is not safe in the government’s hands, introduced with a contrastive marker (‘but’).

Mixed quotation and mixed type of quotation are seen as hybrid forms of quotation, comprising constituents of direct and indirect speech, and are therefore also evaluative. They may fulfil similar functions. The following extract from PMQs (6 January 2016), exemplifies the then leader of the Opposition, Jeremy Corbyn, using a mixed other-quotation with a scare quotation embedded in an indirect quotation to challenge his political opponent. Analogously to the function of an indirect other-quotations with the quotative metarepresented – in this case: ‘claimed’ – and the directly formatted ‘money was no object’, Jeremy Corbyn confronts the Prime Minister with what he had said before and how he had intended the content to be taken: ”This from a Prime Minister who claimed that “money was no object” when it came to flood relief. When he or his Secretary of State meets the Leeds MPs and Judith Blake, the leader of Leeds City Council, in the near future, will he guarantee that the full scheme will go ahead to protect Leeds from future flooding?” The Prime Minister is referred to as ‘a Prime Minister, which signifies some distance between the participants. As in the extracts above, the quotation and relevant metadata are used as argumentative resources to deconstruct the opponent’s credibility, while at the same time enhancing that of self.

Adapting the production and reception format, and social and interactional roles (Goffman 1981; Levinson 1988) to quotation, in particular the parameters +/−ratified and footing (animator, author, principal), the reception format (direct addressee, directly addressed audience, mediated audience and other audiences) is assigned the status ‘+ratified’. For direct quotation and focussing quotation, the quoter adopts the footing of animator, i.e. the speaking machine, and some kind of mediated principal, while the source is author, i.e. the author of the words that are being spoken/read, and who has selected the sentiments and entextualised them, and principal, i.e. someone whose position is established, whose beliefs have been told, and who is committed to what the words say. For indirect, mixed, and mixed type of quotation, the quoter is animator and mediated author and principal, while the source is author and principal.

The communicative function of quotations depends strongly on its source, the quoter and her/his attitude, and the local and global discursive context into which the quotation is imported. A quotation always competes with the speaker's own formulation of the quoted content and pragmatic force. When the speaker opts for the use of a quotation instead of her/his own formulation in a local discursive context, s/he must have good reasons for doing so. This holds for both self- and other-quotations. Quoting others assigns their original formulations the status of being quoteworthy for a particular communicative goal: this may consist of aligning with the quoted and/or its source or of disaligning with the quoted and/or its source. In the former case, the quoted and/or its source are considered to support the current communicative goal and thus are evaluated as relevant; in the latter case, the quoted and/or its source are also considered to support the argumentation of the current speaker, but the supportive function is based on a negative evaluation of the source and her/his formulation of the quoted content and on a more or less explicitly realised positive evaluation of self. Self-quotation generally serves the function of demonstrating argumentative coherence and credibility, which generally goes hand in hand with implying a positive self-evaluation.

The strategic use of quotation in discourse is adapted to the contextual constraints and requirements of the quoting discourse and of its embedding frame, the discourse genre. In mediated political discourse, quotations are communicated to face-to-face addressees as well as to a mass audience. To facilitate felicitous communication and to support the validity of the quotation, metadata, i.e. the contextual and discursive coordinates of the quoted and its source are generally made explicit, e.g., temporal and local frames, party programmes, proper name or a more indeterminate name or reference, or affiliation. The explication of these coordinates does not only serve as a means of identification. Rather, by making the identity of the source explicit, the quoter assigns it the status of 'quote-worthiness', and by making the verb of communication explicit and entextualising it in a quotative, the quoter implicates her/his evaluation of the speech/attitude-report, as is the case with, e.g., the more neutral verb 'say' and the more specific 'blame'. Looked upon from an interdiscursive perspective, quotations may serve as soundbites in other discourse.

The communicative act of quotation may fulfil various functions in discourse. Generally, it is not only the content of a discursive excerpt which is metarepresented, but also its illocutionary force, source and context in which the original excerpt has been embedded. The illocutionary force is captured by the quotative and further linguistic expressions denoting attitude, or tone of voice in spoken language; the source is named in a more or less explicit manner; and the context is indexed with respect to its temporal and local coordinates. Thus, what is quoted, who is quoted, and where the quoted has been uttered is adapted to the contextual constraints and requirements of the quoting discourse, to the communicative goal of the quoter, and to the quoter-intended perlocutionary effects. Against this background, a quotation may display a higher degree of explicitness as regards content and force than its original representation. This is reflected in the quantity and quality of metadata, which refer to the original participation format and physical, temporal and discursive setting; the metadata contextualise them and adapt them to the contextual constraints and requirements of the quoting discourse. Furthermore, the fact that a discursive excerpt is quoted assigns that piece of discourse the status of quoteworthiness. In mediated political discourse, quotations may also be employed to secure the discourse common ground between the media frame and audience, and they may be used to challenge the argumentative coherence and credibility of a politician (and/or her/his party). In the data at hand, other-quotations anchored to a political opponent tend to have an adversative function only: they are used strategically to challenge and deconstruct the argumentation and credibility of the political opponent while at the same time supporting the argumentation of self and his/her party. It needs to be pointed out, however, that the communicative function of quotation is highly context-dependent: one and the same quotation may be used both to reconstruct the credibility of self while at the same time deconstructing the credibility of a political opponent, and in a different context, the quotation may be used to deconstruct the credibility of self while reconstructing the credibility of other.

In the following section, the question of how metadata are used when quoting is examined in political interviews, in PMQs and in political speeches from the British sociocultural context.

3. Quotation and metadata in mediated political discourse

Political discourse is public discourse, institutional discourse, and media discourse, and it has become some kind of professional discourse. The latter is particularly true of institutional political discourse, while grass-root-anchored political discourse may display a different kind of professionalism. Political discourse is thus constrained by its situatedness in public, institutional and media domains, as is reflected in the choice of public topics, institutional topics, media topics and professional topics, and in the choice of public, institutional and media styles and registers (Fetzer 2000, 2013). Those macro constraints – or the adaptability of the participants' use of language – do not only constrain topic, style and register, but also the location and duration of the communicative exchange, self- and other-selection of speaker, and their institutional and interactional roles. As has been pointed out above, the particularised constraints do not only hold for political discourse as a whole, but also for its constitutive parts, such as agent, topic, style, register or quotation. As a consequence, quotations are public, i.e. their validity may be negotiated and followed up in public domains; they are institutional, viz. their validity may be negotiated and followed up in institutional domains; they are mediated, i.e. their validity may be negotiated and followed up in the media; and quotations are 'professional', viz. they are often supplied and followed-up by professional agents.

The macro contextual constraints for mediated political discourse do not only constrain the production and interpretation of discursive meaning in the meso domain of discourse genre, but also in the micro domain of conversational contribution. This is particularly true of the use of quotations. As has already surfaced in the analysis and discussion of quotations in the previous sections, conversational contributions are generally not quoted out of context. Instead, the embedding context of a quotation, especially source and physical, temporal and discursive coordinates, is made explicit. On the one hand, the higher degree of explicitness may pre-empt challenges about the validity of the quoted and thus support the interactional organisation of the credibility of the quoter, making her/him a more professional agent. On the other hand, it may be viewed as making the practice of quoting more transparent. So, what contents and sources are imported into an ongoing discourse and thus seem quoteworthy, and what contextual information as regards temporal, local and discursive embeddedness seem relevant to mention so that any possible challenge of having been quoted out of context may be countered?

All types of quotation have been found in the monologic and dialogic types of political discourse under investigation, that is dyadic political interviews and panel interviews, PMQs and political speeches, but their functions and the types of metadata supporting the quotation differ, showing again the adaptability of the mapping of communicative intention, communicative goal, linguistic form and function. What is of interest is that the communicative function of a quotation does not solely depend on its formatting as direct, indirect, focussing, or mixed type of quotation, but rather is interdependent on the kind of metadata embedding the quoted, in particular source and temporal and discursive coordinates. With mixed quotation, the communicative function is more constrained and its preferred function is to support the interactional organisation of argumentative coherence. In speeches, direct and indirect quotations as well as the mixed type of quotation are used primarily to promote party-political ideology. In interviews direct, indirect, focussing, and mixed type of quotation often have a challenging function with the interviewer trying to unbalance the interviewee. In PMQs, all types of quotation are used and all of them tend to have an adversarial function.

3.1 Quotations and metadata in political interviews

In the political interviews, quotations are generally accompanied by metadata, but the quality and quantity of metadata varies, depending on the intended perlocutionary effects of quoter, on the identity of quoter and source, who may need to be introduced to the interviewee and media audience to ensure an updated discourse common ground, as well as on contextual and discursive coordinates. In all of the quotations identified in the political interviews – and not only in that genre – the communicative act of quotation is furnished with references to its original contextual embeddedness. Necessary components of quoting comprise (1) quoter and quotative, (2) source, (3) quoted, and (4) contextual and discursive coordinates, in particular local and temporal frames. Mentioning these contextual coordinates has the function of underlining the validity of the quoted and thus the credibility of the quoter.

If the quoter or source are public figures and assumed to be part of the collective discourse common ground (Fetzer 2007), introducing her/him with a proper name – sometimes supplemented with title or affiliation – is considered to be sufficient, as is the case in excerpt 2 ('Peter Mandelson'). If the quoter or source are ordinary citizens, they may either introduce themselves and add relevant background information which makes them qualify for taking over a media function, as is the case in excerpt 1 ('voting Labour at the last election'), or they may be introduced by the interviewer. Analogously to mundane communication, self- and other-quotations utilise personal pronouns ('I', 'we' and 'you'). In all of the excerpts contextual coordinates are mentioned, and irrespective of the linguistic formatting of the quotation, other-quotations are used in an adversarial manner and the quoter-intended perlocutionary effect is made explicit.

The following excerpts stem from a panel interview in 2001 between Tony Blair (TB), the then British PM (1997–2007), and Jonathan Dimbleby (JD), a British journalist of current affairs. In excerpt 1 a member of the audience (AM) uses an indirect quotation to challenge TB:[7]

Excerpt 1 (Tony Blair 2001)

AM Thank you. Erm, since voting Labour at the last election, I've been really appalled to see you continue the sleaze, lies, hypocrisy and incompetence in fact of the previous administration. ***When you came into office***, **you SAID THAT** <u>your government would be different</u>. WHY DID YOU SAY THAT IF YOU DIDN'T MEAN IT?

In (1) the quotation is formatted as an indirect quotation and thus subjectified by the quoter's interpretation of the original utterance's force, the generic verb of

7. To facilitate readability, the transcription adheres to orthographical standards while coding spoken-language-specific phenomena, such as repetitions and elliptic utterances. Relevant linguistic cues are formatted as follows: <u>the quoted</u> is underlined, **the source** is printed in bold, the **QUOTATIVE** (and complementiser) is printed in bold small caps, and ***relevant contextual information of the excerpt*** is printed in bold italics. The SPEAKER-INTENDED PERLOCUTIONARY EFFECTS are printed in small caps.

communication 'say', and the quoted is formatted in accordance with the requirements for indirect quote with tense shift. The positioning of self through mentioning relevant metadata, i.e. the background information that the quoter voted Labour in the last election and that the quoted is from the last election campaign, contributes to the transparency of source and at the same time intensifies the perceived element of betrayal, which AM couldn't have indicated if she had not voted for TB. It is particularly important in that context because of the social hierarchy between the communication partners, with TB being not only Prime Minister, but also the source of the quotation and at the same time direct addressee and direct target. Another political-discourse specific feature of quoting is the mentioning of the quoter-intended perlocutionary effect, which is not only stated in rather explicit terms but also assigned the status of an object of talk. It is formulated as a *wh*-question with the presupposition that TB had not said what he meant. This carries the implied accusation that TB has been insincere. What is even more important is the fact that the presupposition triggered by the *wh*-question cannot be challenged[8] directly, that is as a direct response to the wh-question introduced by a dovetailed 'because'. To reject the presupposition, it would need to be made explicit, and only then would it be possible to negotiate its validity (Fetzer 2000). In speech-act-theoretic terminology, not meaning what one says counts as breaking promises and being insincere, if the saying has future reference and thus future implications and is considered to be beneficial to the addressee(s). Against this background, AM's quotation challenges the credibility and ideological coherence of TB and his government in a rather explicit manner, which is further intensified by the transparency of the metadata connecting the previous election campaign with the present one.

In political interviews, participants may quote their direct communication partner, as has been the case in excerpt (1), or they may quote other sources. While the former tend to have a challenging function only, the communicative function of other-quotations from absent sources depends heavily on the local context and on the kind of relationship between source and participant. In excerpt 2, which comes from the same interview, the interviewer JD uses a mixed type of quotation from an ally of TB, Peter Mandelson, in order to follow up on the discourse topic of spin. As in (1), relevant metadata is mentioned, that is source and quotative are specified while the original temporal frame is underspecified ('***the other day***'). As in (1), the intended perlocutionary effect is made explicit as 'the charge that there has been too much spinning', and the politician is requested to comment on the criticism:

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8. I want to thank Elda Weizman (Bar Ilan University, Israel) for having drawn my attention to this particular presupposition.

Excerpt 2 (Tony Blair 2001)

JD **Peter Mandelson** SAID ***the other day,*** there's been too much spin, there ought to be more vision. Do you accept THE CHARGE THAT THERE'S BEEN TOO MUCH SPINNING?

As in (1), the quoted challenges the direct addressee and direct target, TB. However, this time it is not only the PM who is challenged and blamed for not having been sincere and for not having been ideologically coherent, but also his government and the Labour Party he represents, as is manifest in the generalised formulation 'there's been too much spin', which is interpreted by JD as referring to an even more expansive referent, such as British society.[9] It is not only the quantity of metadata, which contributes to the force of the challenge but also the quoter and quoting discourse, into which the quoted is imported. The formatting of the quotation as a mixed type of quotation subjectifies the quoted, allowing the quoter to over-extend its validity, which may however be directly negotiated by the participants of the exchange.

Excerpts 3 and 4 follow the same pattern. Excerpt (3) is formatted as an indirect quotation and coloured by subjectification. Its relevant metadata do not only comprise the contextual and discursive coordinates of the quoted with quoter$_1$ ('**the committee**') and quotative$_1$ ('**SAY**') but also the metadata of the quoting context with quoter$_2$ (the interviewer JD) and quotative$_2$ ('***quote***'), thus preempting the degree of subjectivity inherent in the indirect formatting. Excerpt (4) is formatted as a mixed type of quotation. It also contains relevant metadata referring to the temporal coordinates ('***before the last election***'), thus attenuating the subjectivity of free indirect speech. As has been the case with excerpts 1 and 2, excerpts 3 and 4 also mention the intended perlocutionary effects in rather explicit terms and assign them the status of an object of talk:

Excerpt 3 (Tony Blair 2001)

JD ***And no criticism of the man that you appointed to government, um, Mr Vaz,***[10] when **the committee** SAID of his behaviour, ***I quote to you***, his behaviour was not in accordance with the duty of accountability under the code of conduct. YOU HAVE NO CRITICISM OF THAT FAILURE ON HIS PART at all?

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9. The strong interpretation of Peter Mandelson's original statement may not have been in accordance with the source's original intention, who by juxtaposing 'spin' and 'vision' may have simply intended to initiate a discussion about Labour policies.

10. In 2002, Keith Vaz (Labour MP for Leicester East), was suspended from the House of Commons for a month after a Committee on Standards and Privileges inquiry found that he had made false allegations against Eileen Eggington, a former policewoman.

Excerpt 4 (Tony Blair 2001)

JD Welcome back. In our last remaining time: Europe. Erm Mr Blair ***before the last election*** **you SAID**: <u>I love the pound</u>. Erm, CAN YOU BE TRUSTED TO GO ON LOVING THE POUND?

Quotations in political interviews are not always restricted to a single question-and-answer sequence. Due to the dynamics of discourse in general and of political discourse in particular, quotations can be negotiated by the participants, spelling out their original temporal and local contexts, as is the case in excerpt 5 from an interview with Charles Kennedy (CK), the then leader of the Liberal Democrats (1999–2006), and Jonathan Dimbleby (JD) from 2001. What is of interest to the analysis of metadata in the context of quotation in mediated political discourse is the fact that it is not the validity of the quoted, which is negotiated, but rather the metadata as such:

Excerpt 5 (Charles Kennedy 2001)

JD But **you*'re also the only party leader*** who **SAYS**, ***as you said to me***-

CK Indeed I did.

JD ***not so long ago***, erm, ***when*** **I ASKED you WHETHER** <u>users of cannabis were criminals</u>, **you SAID,** <u>I don't regard them as criminals.</u> And **you SAY** – I'm right, aren't I? – <u>you don't regard them as criminals.</u>CK I- I- that's what **I SAID *to you, in a- in another studio, in an equivalent programme some time ago***, that is my personal view. It is not the position of the Liberal Democrats, let me be quite clear about this.

Excerpt 5 exemplifies the strategic use of mixed quotation and of the mixed type of quotation, targeting the credibility and ideological coherence of the interviewee without mentioning the quoter's intended perlocutionary effects. It is one of the few instances in which the validity of the quoted, source and other metadata is negotiated in such an explicit manner. Not only is the illocutionary force made explicit, as is reflected in the orchestrated interplay of 'you say/said', 'I asked/said', but so is the original context of utterance referring to location, time and participation ('***as you said to me***', '***not so long ago***', '***in another studio, in an equivalent programme***'). In spite of the density of metadata, the context of the original utterance remains rather indeterminate. While CK agrees with both force and content of the quoted, he makes it very clear that he did not speak in his role as leader of the Liberal Democrats, which is implied in JD's formulation '***the only party leader*** who **SAYS**', but rather on behalf of himself as an ordinary citizen. Thus, it is not only source, quotative, quoted and contextual and discursive coordinates, which need to be ratified for the communicative act of quoting to be felicitous, but also the footing and social role of the source. The linguistic formatting of the quotations is also remarkable, switching between past tense and past time, and present tense and present time.

While other-quotations, irrespective of their linguistic formatting, mention the quoter's intended perlocutionary effects and assign them the status of an object of talk, self-quotations do not generally refer to this kind of metadata. Metadata entextualising physical and temporal coordinates are also less frequent and less explicit. In excerpt 6, which stems from the panel interview analysed above, TB uses a first-person-plural-based quotative signifying that he speaks on behalf of his government and party:

Excerpt 6 (Tony Blair 2001)

TB Well, let me try and answer those points, then. First of all, ***in relation to single parents. Yes, it's correct*** that **we SAID THAT** <u>the benefit rules should change, so that single parents were treated the same as married couples.</u>

The referential domain of the first-person-plural pronoun is underspecified. The context, however, makes the referential domain quite clear, indexing the government and thus the Labour Party. The form and content of the quoted displays a high degree of explicitness, which is in accordance with the introductory confirmation '***yes, it's correct*** that **we SAID THAT**'. The function of the self-quotation is to re-establish argumentative coherence, but also the credibility and ideological coherence of the government including the PM himself.

In the interview-data, self-quotation is generally formatted as indirect quotation and used to import a prior conversation contribution into the ongoing discourse. In some cases, self-quotation is also used to criticise the interviewer for not having provided the correct (verbatim) quotation.

Quotations in political interviews are used to boost the pragmatic force of an argument, thus supporting the interlocutor's argumentation, and they are used non-supportively, challenging the argumentative coherence and credibility of other. Quotations are generally embedded in metadata making explicit their source, the quoter's interpretation of the original illocutionary force of the quoted, and physical, temporal and discursive coordinates. While the source of the quoted is generally more determinate, quotative, time and place can be left underspecified.

3.2 Quotations and metadata in Prime Minister's Questions

PMQs take place while Parliament is sitting, once a week every Wednesday, and last for 30 minutes. They always begin with the same tabled question to the Prime Minister, asking if s/he will list her/his official engagements for the day. All other questions are supplementary and may thus have the important elements of unpredictability and surprise. Members of Parliament (MPs) are protected by parliamentary privilege, which allows them to speak freely in the House of Commons without fear of legal action for slander; but they are also expected to observe certain traditions and conventions regarding what is termed "unparliamentary language". The Speaker, who presides over House of Commons debates, may ask an MP to withdraw an objectionable utterance, or even name an MP, i.e., suspend her/him from the House for a specified period of time.

The question-and-answer sequences, especially the one between the Prime Minister (PM) and the leader of the Opposition (LO) contain a high number of quotations. While the use of quotation in political interviews is constrained by the overall leitmotif of neutralism (Greatbatch 1988), MPs can be as partial and as unashamedly partisan as they choose. Thus, opposition MPs can use difficult and challenging quotations, while government MPs can flatter the PM with toadying and obsequious quotations.

The following analysis of the strategic use of quotations focuses on the exchanges between the PM and the LO, considering the quantity and quality of metadata. As regards their linguistic formatting, there are direct quotations, indirect quotations, focussing quotations, mixed quotation, and mixed types of quotation. All of the quotations are furnished with metadata, in particular source, while their contextual embeddedness may remain vague, if the source is the direct addressee, as has been the case in the interviews. If the source is different, e.g. ally, opponent, expert, member of the economy or the general public, quoters provide more metadata. The intended perlocutionary effects of the quotation are also spelled out in a rather direct and elaborate manner, explicating the implicata of conversational implicatures and formatting them as – almost – unmitigated statements or questions, thereby assigning them the status of an object of talk. What is different to the political interviews, however, is the use of the performative quotative 'I quote' co-occurring with the mention of the source, as in excerpt (7), making explicit the multilayered scenario of discourse with the quoter ('**I$_2$ QUOTE$_2$**') quoting a relevant other ('**they$_1$**' referring to SSE, an energy, broadband and phone supplier) and with the quoted ('<u>they have just one strategic priority</u>'), providing information about the relevant other's goals. The quotation contains metadata referring to physical and discursive coordinates ('***on their website***'), and it is formatted as an indirect quotation thus signifying the quoter$_2$'s interpretation, which is elaborated on in the recontextualisation of the quoted with the scare quotes <u>'dividend obsession'</u>. Quoter$_2$ translates the implications of the source's goal into ordinary language thereby adapting his intended perlocutionary effects to the contextual constraints and requirements of the discourse genre thereby making them accessible to the general public, and he requests the PM to take sides with either the 'energy companies' or the 'consumers':

Excerpt 7 (PMQs 16 October 2013)

> Edward Miliband
>
> The person who should be apologising is this Prime Minister, for the cost of living crisis facing millions of families. Now let us talk about SSE. Because **they**$_1$ **SAY**$_1$ ***on their website*** – and **I**$_2$ **QUOTE**$_2$ – **THAT** they have just one strategic priority and **they**$_1$ **CALL**$_1$ it their 'dividend obsession': IT IS NOT TO GET BILLS DOWN; IT IS NOT TO BE ON THE SIDE OF THE CONSUMER. SO IT IS MAKE-UP-YOUR-MIND TIME FOR THE PRIME MINISTER. WHOSE SIDE IS HE ON: THE ENERGY COMPANIES' OR THE CONSUMERS'?

In excerpt 8 the source of the other-quotation, which is formatted as a direct quotation, is an ordinary citizen who is contextualised as one out of "2,000 people" with "a question to the Prime Minister on tax credits" and singled as 'Kelly'. The quoted is presented in plain language with the PM personifying his government. The quoter-intended perlocutionary effect and uptake is also presented in plain language and – because of the *wh*-question ('how much') – carries the presupposition that Kelly will be worse off next year. As has been the case with excerpt (1), the presupposition needs to be made explicit, before it can be rejected:

Excerpt 8 (PMQs 14 October 2015)

> Jeremy Corbyn
>
> I want to ask the Prime Minister a question about tax credits. ***I have had 2,000 people email me in the last three days offering a question to the Prime Minister on tax credits. I will choose just one.*** **Kelly WRITES**: "I'm a single mum to a disabled child, I work 40.5 hours each week in a job that I trained for, I get paid £7.20 per hour! So in April the Prime Minister is not putting my wage up but will be taking tax credits off me!" SO MY QUESTION IS: CAN THE PRIME MINISTER TELL US HOW MUCH WORSE OFF KELLY WILL BE NEXT YEAR?

In excerpt 9 the PM quotes a member of the opposition, a Labour MP, and that is why he presumably furnishes his quotation with very precise metadata, not only mentioning his position in the former government, but also the very determinate temporal context ('***9 September***'). The quotation is formatted as a mixed type of quotation with the quotative (**SAID**) in the past tense co-occurring with the proximal demonstrative 'this' introducing the quoted formatted in the present progressive, underlining the relevance to the here-and-now. As has been the case with the other-quotations in the political interviews, the intended perlocutionary effects are made explicit, assigned the status of an object of talk and elaborated on.

Excerpt 9 (PMQs 16 October 2013)

The Prime Minister (David Cameron)

Oh dear! The only embarrassing thing is this tortured performance. He wants to talk, he wants to talk about the record of the last Labour Government. Let me remind him, on the cost of living, they doubled the council tax; they doubled the gas bills; they put up electricity bills by half; they put up petrol tax 12 times; and they increased the basic state pension by a measly 75p; and then when it came to the low paid, they got rid of the 10p income tax band altogether. They have absolutely no economic policy, and that is why **the former Chancellor, the right hon. Member for Edinburgh South West (Mr Darling),** **SAID** this ***on 9 September***: <u>"I'm waiting to hear what we've got to say on the economy"</u>. WELL, WE HAVE ALL BEEN WAITING, BUT I THINK WE SHOULD GIVE UP WAITING BECAUSE THEY ARE A HOPELESS OPPOSITION.

In excerpt (10), the quoter uses an other-quotation ('**His Energy Secretary**') contextualising the source as standing in for the PM. The quotation is formatted as a direct quotation and the quoter-intended perlocutionary effects are made explicit, disproving the source's claim. The quoter also uses another quotation quoter-formatted as an interrogative, but source-formatted as an imperative. The source ('this Prime Minister') is spelled out only after the quoter has answered his own question and evaluated the source as weak:

Excerpt 10 (PMQs 23 October 2013)

Edward Miliband

Mr Speaker, he really is changing his policy every day of the week. It is absolutely extraordinary. **His Energy Secretary**, ***who is in his place***, **SAYS** <u>he's nothing to do with green taxes</u>, 60% OF GREEN TAXES WERE INTRODUCED BY HIM. And who is **the man** who **SAID**, <u>"Vote blue to go green?</u>" It was him. And I'll tell you what's weak, Mr Speaker: it's not standing up to the energy companies. And that's this Prime Minister all over.

Excerpt 11 contains a self-quotation, in which the quoter is identical to the source, and in which the quoted repeats something the PM has stated before. The self-quotation has the function of constructing the ideological coherence of self while deconstructing that of the political opponent. Self-quotation has an identical function in the discourse genre of political interview:

Excerpt 11 (PMQs 6 November 2013)

The Prime Minister

As **I SAID**, <u>A [Accident] and E [Emergency] departments in this country are now treating 1.2 million more patients now than under Labour</u>. And let me give him one simple fact – [Interruption] – And the simple fact is this.

Quotations are very frequent in PMQs, especially in the contexts of PM meets the LO, and they occur with metadata. Mentioning the source is obligatory while the quality and quantity of references to physical, temporal and discursive coordinates varies. As has been the case with quotations in the political interviews, their formatting as direct, indirect, focussing, mixed, or mixed type of quotation does not seem to have a direct impact on their communicative function. Quotations are used strategically to challenge the opponent, they are used to align with political positions and ideologies and they are used to construct, deconstruct and reconstruct political selves and their ideologies. What is different to their use in ordinary discourse is that the quoter-intended perlocutionary effect is made explicit, assigned the status of an object of talk and elaborated on. Relevant technical terms of the quoted are frequently adapted to the contextual constraints and requirements of the discourse genre, and in the context of PMQs they tend to be translated into a more informal style. Thus, politicians do not leave it to the addressees and audiences to infer the speaker-intended perlocutionary effects, but they want to secure the uptake of speaker-intended meaning and speaker-intended perlocutionary effects. This may be due to the mediated status of PMQs and to the intended addressee: the audience, or rather the potential electorate.

3.3 Quotations in political speeches

Quotations are also found in the communicative genre of political speech in their various forms as direct, indirect, focussing, mixed and mixed type of quotation. Because of the more monologic character of political speeches, the functions of quotation are constrained to the expression of various degrees of alignment and to the construction, deconstruction and reconstruction of ideological and argumentative coherence. Against this background, the focus of the analysis is not on the analysis of the different forms of quotation, but rather on their functions in more traditional, monologic speeches and less traditional, more dialogic speeches. The classification as more monologic or more dialogic is more of a local phenomenon. The political speeches analysed were delivered at annual political party conferences to a face-to-face audience, and the speeches as a whole or excerpts ('relevant soundbites') were broadcast to a media audience and possibly to further audiences, as is the case with political interviews and PMQs.

More monologic speeches contain a higher frequency of attitude-report quotation, and a lower frequency of speech-report quotation. In the context of attitude-report quotation the cognitive verb *believe* is very frequent. As for speech-report quotation, the quotative *say* is very frequent. Excerpt 12 stems from a speech delivered by David Davis in Manchester:

Excerpt 12 (David Davis (Conservatives) 5 October 2005):

> **Margaret Thatcher SAID** then: This attack has failed and all attempts to destroy democracy will fail. And **I CAN TELL *you* THIS**: this new threat will fail too.

David Davis identifies the source with a proper name ('**Margaret Thatcher**') and formats the quotation as a mixed type of quotation with a past-tensed quotative ('**SAID**'), underspecified temporal metadata ('then') and a perfective aspect and future-oriented quoted, connecting the past with the here-and-now of his speech. He imports a highly relevant historic figure and the ideology she represents into the ongoing discourse, underlines her relevance to the here-and-now and also signifies future implications. Following-up on the quotation, David Davis uses a self-quotation in a focussing manner in order to align with Margaret Thatcher and her ideology, implying that she has been right and that he will also be right. Connecting the quotation by relevant other with his own position, David Davis presents himself as a potential successor of Margaret Thatcher and thus as another competent leader. It needs to be pointed out that – unlike in the interviews and in PMQs – speaker-intended perlocutionary effects are not mentioned in the more monologic political speeches.

The more dialogic speeches can be considered as a modern type of monologue, combining features of traditional monologic speech with conversational interaction, thus being in accordance with the critical-discourse-analytic observation that British institutional discourse has become more and more conversationalised (Fairclough 2001). Excerpt 13 stems from a speech delivered by David Cameron in Birmingham:

Excerpt 13 (David Cameron (Conservatives) 1 October 2014):

> ***A few weeks ago***, Ed Balls said something interesting [LAUGHTER] **he SAID** in thirteen years of Government, Labour had made 'some mistakes'. 'SOME MISTAKES'. EXCUSE ME? YOU WERE THE PEOPLE WHO LEFT BRITAIN WITH THE BIGGEST PEACE-TIME DEFICIT IN HISTORY...WHO GAVE US THE DEEPEST RECESSION SINCE THE WAR...WHO DESTROYED OUR PENSIONS SYSTEM, BUST OUR BANKING SYSTEM...WHO LEFT A MILLION YOUNG PEOPLE OUT OF WORK, FIVE MILLION ON OUT-OF-WORK BENEFITS – AND HUNDREDS OF BILLIONS OF DEBT. SOME MISTAKES? LABOUR WERE JUST ONE BIG MISTAKE.

The more dialogic political speeches have adopted features from the political interviews and PMQs. They use more metadata and also mention the quoter-intended perlocutionary effects. As has been the case with all other discourse genres examined, the sources are identified by the use of proper names ('Ed Balls'), while original local and temporal frames can be left underspecified ('***a few weeks ago***'), as has been the case with the interviews and PMQs. In the more dialogic speeches, mixed quotations, mixed types of quotation, and direct, indirect and focussing quotations occur frequently. Excerpt 13 contains a mixed quotation with a scare quotation embedded in an indirect quotation with quoted and quotative in past tense. Unlike in the more monologic speech of excerpt 12, the quoter-intended perlocutionary effects are mentioned by echoing the scare quotation with an ironic manner and with rising intonation, thereby challenging its validity. That challenge is elaborated on and generalised to the Labour Party as a whole. As has been the case with almost all of the quotations analysed in the interviews and PMQs, the speaker-intended perlocutionary effects are assigned the status of an object of talk and are elaborated on to secure uptake with audience, who may not share the politician's argumentation or background knowledge. The elaborations in the speeches are, however, of a less adversarial nature than the ones in the interviews and in PMQs.

4. Conclusion

This contribution has analysed the communicative act of quotation with respect to the quantity and quality of metadata contributing to the transparency of sources in the context of mediated political discourse and the discourse genres of political interview, Prime Minister's Questions and political speech. In the data under investigation, the communicative act of quotation is formatted as direct quotation, indirect quotation, focussing quotations, mixed quotation or mixed type of quotation.

In the monologic and dialogic data examined, quotation is used in a genre- and context-specific manner. In the dialogic interviews, self-quotation tends to be used in particularised contexts only, where self intends to reconstruct her/his credibility. The infrequent use of self-quotation in the dialogic data is in line with the more generalised modesty principle (Leech 1983). Furthermore, self-quotation utilises less metadata, and generally does not mention the quoter-intended perlocutionary effect and thus does not assign them the status of an object of talk. Other-quotation, especially recycling what other has said/written before, is less constrained. It is used to challenge the argumentation of other, signifying a lack of coherence and/or credibility on her/his side. In PMQs, other-quotation is used in an adversarial manner only, deconstructing the credibility and ideological coherence of the political opponent and their allies while implicitly reconstructing the credibility and ideological coherence of self and their allies.

In the political speeches, the use of self-quotation, representing-the-party-quotation, and other-quotation is less constrained, and it is generally not supported by a lot of metadata. In that genre, politicians use self-quotation to promote their party-political programmes and ideologies, to re-establish coherence and credibility, to narrate the political self and to do leadership in context (Fetzer & Bull 2012).

Other-quotation is used either to support the own argument, if the ascribed source is a member of an in-group, or to challenge the opponent, if the ascribed source is a member of the opposition or another out-group.

In both the monologic and dialogic genres, the adaptability of mappings between form, function, communicative intention and communicative goal holds for all the kinds of quotation identified and with all kinds of metadata imported into the discourse. Quotations are used strategically and fulfil an important interpersonal function with respect to political selves aligning and disaligning with the audience-as-a-whole, or with particularised subsets of the audience, and with political allies. Quotations thus play an important role in the presentation of political self in the media, in particular with regard to the interactional organisation of credibility and ideological coherence.

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Appendix

Political interviews

5 May 2001	Tony Blair (Labour) & Jonathan Dimbleby – Ask Tony Blair
17 May 2001	Charles Kennedy (Liberal Democrats) & Jonathan Dimbleby – Question Time Special – Challenge the Leader

Prime Minister's Questions

16.10.2013
23.10.2013
06.11.2013
30.10.2013
14.10.2015
06.01.2016
23.03.2016

Speeches at annual party-political conferences

Date	Politician
05.10.2005	David Davis (Conservatives)
01.10.2014	David Cameron (Conservatives)

CHAPTER 8

The adaptability of becoming

Karina Buhr's becoming-junglehood

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This chapter draws upon Karina Buhr's image of becoming-junglehood in order to contribute to a discussion of the pragmatics of adaptability. Buhr is a Brazilian feminist singer who is interested in recontextualizing terms of a male-dominated tradition on more affirmative grounds. She thus adapts semiotic forms – verbal language and her bodily performance – as *disruptive* forms, and thereby looks for more liberating grounds of language use. Theoretically, the chapter nuances Buhr's rationalizations by engaging with Walter Benjamin's formulations about art and its mechanical reproducibility; with Derrida's iterability of language; and with Deleuze and Guattari's articulations of assemblage, subjectivation, and becoming. The paper finally critiques a metaphysics of unity by identifying processes of rupture and adaptability in Buhr's discursive practices of becoming-junglehood.

Keywords: reproducibility, resignification, iterability, différance, assemblage

1. Introduction

In this chapter, we draw from Brazilian feminist Karina Buhr's artistic image of 'becoming-junglehood' in order to contribute to the present collection's discussion of the pragmatics of adaptability. Becoming-junglehood indexes the fluidity and resignification of the work produced by Karina Buhr in her third album. '*Selvática*' – '*Junglehood*'[1] in Portuguese – is how she titled this solo album, released in 2015.

1. *Selvática* (*'junglehood')* is a neologism in Portuguese. It can refer either to elements created in the jungle or biblical passages such as "But God [here the word indicates the interest of God and His Grace in favor of someone] remembered Noah and all the *wild* animals and the livestock that were with him in the ark…" (Genesis 8:1). When God instructed Noah to leave the ark, He blessed not only the human race, but also the animals (Genesis 9:9–10). We could have translated *selvática* ('*junglehood*') as *wild*. However, we preferred to use the suffix *-hood* as a way to give emphasis to the neologism in Portuguese.

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In the present contribution, we attempt to engage with the artist's rationalizations about art and the reception of her work, with a theoretical approach based on philosophy (Deleuze & Guattari 1980; Benjamin 1969 [1936]), and with linguistic pragmatics (Mey 2001; Derrida 1991), concerning the adaptability of linguistic forms and the critical potential of this process.

To begin the discussion, what do we mean by adaptability? First off, adaptability could be conceived of as the ability of something to adapt to something else in a given context, or, as Mey put it (2006: 8), "each system adapts to the other; their functional qualities [are] taken together". The recurrent sense of adaptability seems to presuppose the existence of something existing a priori that adapts to another form. Thus, "adapting" suggests a movement of detachment from something that apparently had been fixed.

In the case of subjectivity and identity, "becoming" turns out to be a movement of detachment. Deleuze and Guattari (1980) suggest that becoming is neither a process of similarity, nor of imitation. Becoming-woman, for example, is a process of subjectivation and identification.

A relationship involving language, identity and subjectivation has been known to exist within different theoretical perspectives throughout the history of philosophy and of linguistic studies. Following Deleuze and Guattari (1980), we may speak of this history in terms of an epistemological divergence between a *greater* science and a *smaller* science: the former concerned with the 'solid' whereas the latter is concerned with the 'fluid'. Seen from the viewpoint of its 'solidity' paradigm, language imprints a status of firmness upon predication; it is seen as reflecting logical thought, which precedes language. The main function of language would be the unveiling of truth. By contrast, a 'fluidity' paradigm presents itself as the constant production of meaning and truth – a pragmatic perspective on language that opposes itself to fixedness of predication.

To facilitate the discussion in this chapter, we turn to a theoretical framework that may help us provide a coherent picture of the adaptability of a becoming – namely, Karina Buhr's "becoming-junglehood". Thus, our theoretical framework will consider art and its technical reproducibility in accordance with Benjamin (1969 [1936]), the iterability of language as proposed by Derrida (1988), and the relation between assemblage, subjectivation and becoming, following Deleuze and Guattari (1980); in spite of their different stances, these authors all aim at disrupting what we might call the 'metaphysics of fixity'.

In what follows, we shall discuss how the work of Karina Buhr and the critical thinkers listed above disrupts hegemonic formulations about art, language and subjectivation; the adaptability of a *becoming-junglehood* occurs in the interstices of these ruptures. In order to understand how this adaptability happens, however, we first briefly summarize our theoretical stance in Pragmatics.

2. Connection, dissemination and intervention

In this connection, we first draw attention to the social and political character immanent in the 'fluidity' of language: a point of view that prior to its being linguistic, is decidedly political (Deleuze & Guattari 1980; Rajagopalan 2014). 'Natural languages' are discursive and political projects (Woolard 1998); and a language's ability of mirroring facts in the world is destabilized by its performative character (see Mey, this volume). In other words, the facts in the world we talk about are made and remade in language. We thus understand language as action and process, as opposed to representation and product (Alencar 2014); this implies that society, politics and language are mutually constituted. This is also why we here emphasize a perspective of language as a social practice, along the lines of pioneering proposals set forth by researchers such as Mey (2001), Verschueren (1999) and Rajagopalan (2014).

When attempting to understand pragmatics as a perspective on language in its social setting (Verschueren 1999; Mey 1985, 2001), we seek to map the adaptability of a *becoming*. This adaptability occurs through an *assemblage*, joining language and the body. This assemblage is part of a discursive practice in which *becoming* moves in and out – sometimes fully realized, sometimes blocked. Mapping this 'alternation' – this *becoming* and *unbecoming* – concerns the tracing of lines of a type of adaptation that unfolds through repetition, as we will discuss below. When we map the connection of this adaptation as an assemblage, we are expressing the fluid character of these assembled concepts, as well as of other related ones such as context; in this way, too, we map the discursive practice of a *becoming-'junglehood'*.

Karina Buhr's *becoming-'junglehood'* takes place through 'hyperconnection' (Santaella 2013), when people, systems, animals, things and places are all connected over the Internet. Thus, interaction, circulation, dissemination, and discursive intervention become visible in the World Wide Web (see Jacquemet 2016; Harper, Watson, & Woelfer 2017; Harper, Watson, & Licoppe 2017). The web has been transformed from static to dynamic: sharing information through a social networking website means a lot more than just *sharing*. Information is repeated to generate ruptures – at least in terms of context.

To shape our understanding of the disruptions caused by the dissemination of Karina Buhr's art on a mobile and participative environment such as the Internet, we will next discuss Benjamin's idea of mechanical reproducibility in the field of art.

3. Art and reproducibility

The German philosopher Walter Benjamin (1892–1940) introduced a concept that corroborates the idea of adaptability we are entertaining here: *reproducibility*. Stemming from his meticulous analysis of art in the era of its technical reproducibility – in particular the emergence of cinema and other technologies of mass dissemination of artistic forms –, reproducibility refers to the abandonment of the so-called *aura* of uniqueness in the artistic field. The work of art loses its aura when the technical reproduction becomes a part of the artistic process. With mechanical reproduction, artistic objects are no longer bounded by the limits of a "cave", a temple, or a museum – works of art may be reproduced and disseminated to multiple sites, albeit in a replicated form. Along with this process, other sets of traditional concepts linked with aura, such as the cult value, are challenged.

The authority of the work of art in itself, its authenticity, disappears through its reproduction. In earlier ages, few people had the access to a painting. A certain painting, in the possession of the Church in the Middle Ages, for instance, held the value of being worshipped, and was used solely for that ritualistic purpose. Reproducibility allowed access to more people, so the painting acquired a surplus value of exhibition. The work of art lost its aura and simultaneously became more accessible – in a process that of course is neither completely "free" nor linear, as copyright and other sorts of gatekeeping have always been formulated to prevent the circulation of certain works deemed too precious or otherwise valuable to be reproduced.

In Benjamin's terms, reproduction expresses a relationship between a collectivity as a human *mass* and a work of art. In other words, reproduction is about a relationship between the masses and works of art as specific forms of perception – a relationship that depended on certain new modes of existence. This relationship generates a massive rather than a unique existence of the work of art, where every *repetition* (every token) leads to an update in the value of the original (the type). One of the social meanings of this movement is the atrophy of the traditional as well as of the patrimonial value of culture. Yet a tension exists between on the one hand, the unity and durability of works of art within the core of tradition and on the other, their transitoriness and *repeatability*.

The social function of a work of art changes when reproduction is involved. Every work of art reproduced is created to be inserted within this reproducibility framework. Its social function is no longer founded in ritual and/or worship: now, it is a matter of politics. Benjamin's remarks are inspired by the changes in the artistic field brought about by the emergence of the cinema. But also, writing in the mid-1930's, Benjamin highlights the dangers inherent in such a new social function of art when its concepts work in favor of fascism. As a German Jew on the run from

Nazism, he knew this danger first-hand through the cinematographic propaganda released by the regime.

A movie-picture actor, like a political leader, represents himself before two devices: one responsible for capturing the image (the camera) and the other for the capture of the sound (the microphone). Whereas this representative relationship is unilaterally created by the film industry for the audience, the masses, the audience still exerts an invisible control on the actor performing a scene – a control which originates in the cinematographic capital dominating this relationship, by creating the cult of stardom and the cult of the public. Fascism takes advantage of this phenomenon in order to prevent the masses from developing a class conscience and questioning the property relations involved. And this is why the dictator is pretty much like a movie star.

Through technical reproducibility, fascism performs a political aestheticization. The aestheticization of politics is merged into a unique point: *war*, in order to preserve the self-alienation of the masses and the existing property relations. According to Benjamin, when the mass becomes witness to its own destruction, the demand for an expropriation of film capital becomes a priority for the proletariat.

Other points may be added to conceptually grasp the demise of the aura in the work of art, including its autonomy and its value of eternity. The decreasing distance between author and audience is one of them. In the case of literature, with the growth of the press at the end of the 19th Century, the audiences, in addition to the pleasure of reading a literary piece, were allowed to write and publish their own criticisms about their reading. Another conceptual point is perfectibility: when a work is no longer produced in a unique act, as a one-time performance, it can always be made 'better'.

Technical reproducibility also led to distraction instead of immersion on the part of the audience; dispersion takes the place of retreat; in addition, there are the tactile qualities guiding our optical perception (as in the movies), whose shocking effects are aimed to take over the audience's perceptive structures. Benjamin (1969 [1936]: 180) maintained that such conceptual points may yield revolutionary demands in the politics of art.

4. Language and iterability

Within the field of language studies, there is a concept which is remarkably like reproducibility: it is the notion of *iterability*. Devised by the philosopher Jacques Derrida (1930–2004), iterability refers to a condition of language that allows it to serve for the purpose of communication – communication understood here not as the mere transmission of meaning, but as the representational extension of an *idea*.

By using his philosophical strategy of *deconstruction*, Derrida (1991) brings this concept into light from a double movement 'applied' to the metaphysical pair speech/writing. This double movement consists of an *inversion* and a *displacement* pertaining to deconstruction. Therefore, he makes use of the concept of writing inscribed in the philosophical thought of *logocentrism*,[2] thus inverting the hierarchical pair that regulates the concept of writing and, at the same time, displacing its system of conceptual predicates.

Logocentrism postulates that writing is nothing but a form of communication. Communication, in its turn, is either treated as mere transmission of meaning, or as a means of unveiling the truth. Truth is therefore rendered as something transparent and homogeneous, produced by an "intentional" mind. Derrida calls this framework a *metaphysics of presence* – the idea that the presence of the individual and her speech to herself would be the core of the production of meaning. Yet Derrida's anti-foundationalist philosophy proposes that writing displaces this presence by taking place in occasions where sender and receiver are not co-present. This is why Plato warns us in *Phaedrus* that writing is dangerous.

Derrida generalizes this absence vis-à-vis language as a whole – a general non-presence that affects the participants of the communicative process, and reaches to the very end of the contextual horizon required for signification. As a positive difference (*différance*), absence generates ruptures through a logic linked to repetition and alterity. Derrida calls this logic of displacement '*iterability*' (cp. Latin *iterum* 'again')

Writing is only writing when it maintains its *action* feature, even in the absence of its sender and receiver. And what applies to writing must apply to the entire language. Every mark, every sign, if legible, *acts*. Through legibility and repeatability – the ability of a mark to be repeated or quoted again –, a breach is made. (This logic is similar to Benjamin's (1969 [1936]) reproducibility of art and the downgrading of the uniqueness of aura discussed earlier).

Iterability presupposes a general *quotability*[3]. Every time a given mark is repeated, a rupture or adaptation to new contexts happens. Such repetitions can trigger a certain conformity vis-à-vis regimes of signification and/or re-signification. The first case, the signification regime, presents the operation of identity. The second case, re-signification, presents the difference (*différance*), which is the possibility of existence of the first case. This occurs because différance allows meaning to be made present only when a mark relates to an element other than itself.

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2. *Logocentrism* refers to the demanding desire for a meaning, the immediate access to knowledge, the truth, which has been codified by the Western *metaphysics of presence* (Derrida 1974).

3. See Anita Fetzer's chapter in this volume for a fine-grained pragmatic and sociolinguistic account of quotability in mediated political discourse.

Understanding communication as *action* leads us to the language philosopher John L. Austin (1911–1960) and his theory of *speech acts*. Derrida (1991) himself proposes the concept of iterability in his reading of Austin's (1975) discovery of the *performative*. In spite of Austin's critical stance, Derrida still sees "the ethical and teleological discourse of consciousness" (1988:18) as operative in the thinking of the English philosopher.

Derrida's criticism is directed at the *presence* which is required by the circumstances referred to by Austin (1975) as essential for the success of a performative. For example, Austin requires a sort of bounded, determinable context for the success of a performative speech act. A second condition requires a notion of *presence* in Austin's model: the consciousness of participants or interlocutors. Such a consciousness gives support to the idealization of an intention of meaning, an intention of the speaker. Therefore, an intentional subject would be the one responsible for communication. Moreover, according to Derrida (1991), Austin (1975) does not consider among his theoretical assumptions the citational character of language in relation to the success of a speech act. For Austin, a performative speech act that is not "serious" – for instance, an utterance said by an artist on stage – would not lead to a performative action of language. By contrast, Derrida's iterability presupposes that the citationality operative on stage is the same that takes place ordinarily. We are constantly putting someone's words into quotation marks and performing actions while citing them.

Acknowledging iterability as a structure – which is remade at every repetition of a mark, every iteration – makes us see language as question of effects: effects that the *forces* of a speech act are able to produce; effects brought about by iterability (see Butler 1997).

5. Subjectivation and assemblage

Now, let's move to another model of signification that also places emphasis on breaking with tradition – in this case, a rupture with traditional ideas about subjectivation. Breaking with the idea of a single, rational and autonomous subject, based on the Cartesian, 'early-colonial' (but also modern) model proposed by Derrida's contemporaries Gilles Deleuze and Félix Guattari (1980) as what we may call a 'Philosophy of Difference'. They draw especially from the writings of Friedrich Nietzsche (1844–1900) on *difference*. For Deleuze and Guattari, the notion of *becoming* has to do with an affirmation of difference that is not predicated on a logic of identity.

Questioning a long-standing tradition on being and identity, Deleuze and Guattari critique the transcendental subject of modern philosophy. Instead of speaking about a "subject", they prefer the idea of *agency* – that which produces 'becoming', or difference itself, as a creation of life. Agency presupposes a constitutive relation between human and non-human elements. Agency is also able to transform itself – that is, to *deterritorialize* itself into a becoming-other.

Our aim therefore is to consider the adaptability of becoming by taking the earlier mentioned concept of assemblage (Deleuze & Guattari 1980) as a starting point: adaptability acting as an adaptation to new contexts through a given reproducibility and iterability. According to Deleuze and Guattari (1980), every assemblage comprises two axes: a horizontal and a vertical one. The horizontal axis represents expression and content, i.e. a collective assemblage of enunciation and a machinery of desire.[4] The vertical axis is made up of territorial stakes and deterritorializing trends.

In an assemblage, a relation is found between language (expression) and the body (content). Language is understood as social enunciation, comprising free indirect speech, thus forming part of the assemblage as a collective enunciation. Even though language and the body are independent, they paradoxically configure a relation of reciprocal presupposition – a relation which becomes manifest whenever a speech act is ascribed to a body as the variation of a collective assemblage of enunciation (Deleuze & Guattari 1980). The meaning of the body arises, in its most general form, from the bodies as we usually understand them, up to moral bodies, in a quasi-mechanical production as it engenders connections with other bodies, thereby allowing for stops and flows. The body does not produce these connections on account of its technical or mechanical qualities, but because it is a *social* body.

In addition to being composed of two axes, every assemblage establishes a mechanism with two modes: one devoted to a plan of organization and development, and another devoted to a plan of composition and creation; these two modes are the general 'plans of life'. Subjectivation happens when the assemblage is turned to the plan of organizing and developing the organism and its significations. However, when a new element – semiotic or non-semiotic, human or non-human – meets this assemblage, the confrontation may lead to ruptures and actions resulting in a different assemblage. At this moment, the original assemblage turns its mode towards the plan of composition and creation.

4. Like 'becoming', we understand *desire* as the production of social reality. In *L'Anti-Édipe* (1972), Deleuze and Guattari affirm difference under the primacy of desire. Yet in 1980, with *Mille Plateaux*, the focus of difference is shifted to *becoming*. In this sense, desire should not be confused with psychoanalytical desire, as lack or excess. Desire is historical, social and political, realized by agency. Agency, therefore, is mechanical because it becomes social by establishing connections between human and non-human elements (such as machines) when producing reality.

Here, *deterritorialization* does not imply an escape from reality (as one might think); rather, it is the very creation of reality by which an absolute deterritorialization produces a *reterritorialization* – a territorialization that does not imply a return to the previous territory, but rather to a new *world*. The micropolitics of pragmatic adaptability makes use of this becoming, the power of deterritorialization arising from the vertical axis of an assemblage. Thus, these becomings are adaptive departures from the fixed territories of subjectivation, organism, and signification. The next section will discuss this process in more detail.

6. Adaptability of a becoming

From a traditional point of view, the connection between the two terms, adaptability and becoming, might sound awkward, especially if we are faced with a notion of adaptability that has its roots in a modern thinking predicated on the unity of a being, a subject. While at first sight, we could disapprove of a subject that is merely adapted to situations and contexts, still, as we agree with this disapproval, we might unwillingly be buying into the implied idea of the subject as simple presence – a notion against which we have been positioning ourselves along our conceptual journey so far..

We do not conceive being as produced through representation; it is a process, or an action. Even so, this process is not a matter of dialectics, ending up in the production of a subject, of an identity. The process at issue here refers to becoming as a *processuality* that generates that which is new. The novelty comes to be new at the moment when it displaces a given 'metaphysical pair' – to use Derrida's (1974) words – or an 'assemblage' – if we prefer Deleuze and Guattari's (1980) terminology.[5] Following Deleuze and Guattari, we prefer to think about adaptability as being in harmony with becoming through an assemblage. But at the end of the day, what *do* we understand as *becoming* – specifically *becoming-woman*? And how does such adaptability take place? That is what we discuss in the next sections, making use of the 'Junglehood' inscription.

5. The parallel traced here between Derrida and Deleuze and Guattari is only concerned with the philosophers' criticisms with respect to the issue of identity and signification through a differential process; they share an anti-representational view of language. However, subtle differences between their philosophies remain, as pointed by Williams (2012).

6.1 The 'Junglehood' inscription

As we stated in the introduction, *'Junglehood'* is the title of the third solo album by the Brazilian singer-songwriter Karina Buhr. Released in 2005, *'Junglehood'* was received by a significant part of the Brazilian musical critics as a feminist album, in which feminist discourse is more emphasized than it was in her previous work. However, if closer attention is paid to her previous releases, a few inscriptions not perceived at first glance will be found – something that does not apply to her most recent work.

Here, it is not our intention to map out Buhr's feminist discourse in all of the lyrics of *'Junglehood'* or elsewhere. We just want to analyze the inscription that gives a name to her latest album, and perceive the *becoming-woman* that has enabled this inscription. This starting point will allow us to observe reproducibility and iterability within the process of adaptability: a becoming as the adaptation to new contexts.

In a 2015 interview with a Brazilian blogger, Karina Buhr reveals how she devised the name of her album:

> I took this name from Genesis, in the Bible, which tells about wild animals, the lousy ones: rats, vipers, scorpions. And next, when the woman comes on to the scene, I started to imagine that she would also be wild, due to everything that history has shown so far and how she is represented in all those texts: the woman is always related to treachery or weakness wherever she appears.[6]

Here '*wild*' (for '*junglehood*') has undergone a displacement. The word was taken from a previous context through a process that simultaneously inverted and displaced its meaning; hence it would probably be more appropriate to say that a multiplication of meanings as taken place. This multiplication occurred by means of the iterable feature made possible through the word's actively maintained legibility. While promoting a rupture in the context, iterability always presupposes the word's quotability. When a new context has materialized for *wild* ('*junglehood*'), we realize that the word is now adapted to a feminist discourse.

The rupture at issue did not occur solely at the contextual level, but also in terms of assemblage. The adaptability of a becoming is perceived against the backdrop of a certain subjectivation implying the contextual rupture. The assemblage – in which we can identify a few elements, such as biblical discourse, gender, and music – has turned its mode to the composition and creation of life by a certain woman, reflected in a scene of wild animals, and turned into a warrior. And 'warrior' is now a new sense of *wild*.

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6. The interview was given to blogger Cynara Menezes, of the Socialist Morena blog, and published on September 22, 2015: <http://www.socialistamorena.com.br/a-selvatica-karina-buhr-contra-o-faceburca/>

In this feminist discourse, one notices that the becoming-woman took place before it could be identified as such. In this regard, a woman is turned into woman at the moment when the sense of becoming-woman is transformed as well. The becoming-woman functions as an entrance for other *becomings* (Deleuze & Guattari 1980): a *becoming-child*, a *becoming-animal*, a *becoming-imperceptible*, along with many other deterritorializing moves, such as becoming a world politician, even a *becoming-everyone* – in other words, we are looking at a constructivist enterprise. Then again, when we think about the relation between language and the world, we may say that the becoming creates a *perspective* – which is why we consider language as a becoming, a construction of the world, and not a relativistic-inspired version of the world.

In other words, we prefer a feminism that is, on the one hand, not defined in advance as a definable group, but that, on the other, is satisfied by a becoming-woman in an empowering sense – a *becoming-'junglehood'*, intensified by the iterability of the expression. As Marcia Tiburi has it,

> It was meant to feel yourself *'Junglehood'*. Karina sent me a piece of the Bible through the telephone. I thought to myself: this is a message for the 'Junglehood' that unites and makes us apart. The one that breaks into our dialectical senses. I had the poetry of Karina Buhr, the one that does and undoes all the nexus by means of its post-human, anti-diluvian, hyper-uranic sorcery. There was the sound, the elements of magic. The one that took us back in time, back to Genesis, in order to break into pieces the macabre misery that invented the woman out of a part of the man.
>
> From that text prepared to fuck us up, she rearranged it bravely from within an old environment in a way that no one could expect. (Tiburi 2015: 12)

6.2 'Junglehood' and Facebook

As shown in the previous section, the *'junglehood'* inscription occurs through a process of iterability, a repetition back to alterity via difference, thereby allowing for the creation of novelty. This iterability happens as reproducibility; after all, the aura is demystified through a repetition that provokes ruptures, either in context or in subjectivation. In this way, we map the adaptability of a becoming as an adaptation to new contexts through assemblage.

Currently, we are experiencing another movement that rejoins this process – one that is related to the release of the album *'Junglehood'* in September 2015. As a common practice in this "language game" (Wittgenstein 1953), in our days *releasing an album* is something that happens in the digital social network. It is possible to say that it is all about a new assemblage – but only on the condition that we remind ourselves that prior to the social networking websites, releasing and launching an album happened almost exclusively through the printed media: newspapers, magazines, catalogues. Nowadays, artists are able to release their production step-by-step through social networking, and many of them actually do so. In short, social networking enables the 'massive approach'[7] mentioned by Benjamin (1969 [1936]).

As for Karina Buhr, she released the cover for *'Junglehood'* and a song from the album – "Eu sou um monstro" ["I'm a monster"] on Facebook. Her feminist discourse is immediately heard in the song's lyrics (composed by the singer herself, where she proclaims: "Today I do not want to talk about beauty / Listen to your calling me a princess / I am a monster".[8] We understand the release of the cover and the song as an action that, being legible, updates a structure of iterability. Anyone taking part in this structure becomes repeatable, having shared in the action over the internet, either through social networking or via a specific website.

Sharing/repeating leads to a rupture of contexts, caused by an alterity, the 'otherness' of the action. In addition. through this sharing/repeating and rupture of contexts, the process of subjectivation is ruptured, and we experience a multiplication of meanings happening through another assemblage. Social networking lends new *intensity* to the assemblage under which a *becoming-'junglehood'* is activated, thus configuring a further assemblage. In this case, social networking acts as a new element, a new device (Deleuze & Guattari 1980), coupled with a quasi-mechanical assemblage.

Nevertheless, these ruptures in context and subjectivations are subjected to a certain control. When an assemblage turns its mode to a plan of organization and development, the control mechanism steps in to downgrade the *becomings*. The control is maintained through a permanent subjectivation, operating as the 'surplus value of power' (Guattari & Rolnik 1996). This *capitalistic subjectivation*, as we will call it, exhibits the ability of capital to block becomings, to transform them into products, and to capture their identities. In doing this, social networking performs an assemblage at the level of an *apparatus of capture*.

Regarding *'Junglehood'* and its release, the social networking website Facebook presented itself as such an apparatus of capture. The album cover was censured by Facebook because it contained a photograph of the singer posing with nude breasts while holding a dagger (see Figure 1). The reason for the censure, as stated by Facebook, was that the cover disturbed the image of the virtual community as an ideal environment and its principles; we read this 'ideal environment' that as

7. Primo (2013) has an interesting text in which he thematizes the massive potential of a social network like *YouTube*. He deals with the additional meanings acquired by terms such as mass, niche, and crowd, as opposed to their trivial meanings at the technological level, where interaction is strictly not taken into account.

8. Music and lyrics can be found at: https://www.youtube.com/watch?v=pNFfEiVBqZM.

Figure 1. Cover of the album *Selvática*, by Karina Buhr (reprinted by permission)

embodying the ideality of a given context and of our subjectivation. When the *becoming-'junglehood'* was censured by Facebook, the website blocked the singer's profile, where she had shared her releases – and where many other users had performed the sharing/repeating of *Selvática* ('*Junglehood*')'s inscription as a pragmatic act (Mey 2001).

6.3 "We are not naked. We are just not wearing a shirt"

The censorship practiced by Facebook generated a series of posts supporting singer-songwritter Karina Buhr. In addition to posting texts, many Facebook users posted images of other album covers containing exposed breasts, not to mention the ones who posted pictures of themselves – not showing their "naked breasts", but "just not wearing a shirt" (see Figure 1). Even the Brazilian Ministry of Culture (MinC) took position against this censorship through its Bureau of Citizenship and Cultural Diversity (Secretaria da Cidadania e da Diversidade Cultural, SCDC)'s page. However, the Ministry faced censure itself for sharing the cover of *Selvática* on Facebook in order to join the protests in favor of the artist. The SCDC page was closed down for some time, and its administrators had their profiles blocked.

In this case, a postulated ideality of context and subjectivation, not to say a signification regime, was enforced by Facebook, and an 'assemblage' in the shape of a capture apparatus (a 'power device'; Deleuze & Guattari 1980) was effectuated. Its 'life plan' was validated through organization and development; it supported a modern-colonial way of thinking, acting like a 'grammar' that divides us into rigidly defined pairs: man/woman, adult/child, black/white, and so on.

Even so, some variation may occur in relation to such a grammar, thereby nullifying the rupture and bringing the capture to an end. On the one hand, a captured variation may be maintained as *negative* at the pair level (for example, woman/transgender, where the *difference* is operated as a distinction); on the other hand, a *positive* variation may be registered as a *becoming*, inasmuch as it continues to be creative: Derrida's (1974) *différance*.[9]

Facebook provided us with an assemblage acting as an apparatus of capture. From a stratified space-time point of view, its suppressing the previous *becoming-'junglehood'* had enabled a rupture of signification and context, of subjectification and organization – two movements that downgraded the adaptability of a becoming. In the final part of this section, we will focus on a third movement that engendered a rupture within the network itself: the capture of the social networking that we discussed above.

Journalist Aline Feitosa and photographer Beto Figueiroa, from Recife, the capital city of the Brazilian State of Pernambuco, created an *action-art-manifesto* entitled *Selváticas*. In this manifesto, fourteen women, including Karina Buhr, displayed pictures of themselves with their breasts uncovered. The *Selváticas* manifesto supported the artist's fight for freedom of expression on a social networking website, and condemned the sexualizing (and disciplining) of the female body. Aline Feitosa, whose Facebook profile in Figure 1 was also blocked after having posted her picture with exposed breasts, tells us, within the context of the action-art manifesto, that "We are not naked. We are just not wearing a shirt".[10]

Here, the expression *'junglehood'* is once again at issue in its repeatability, as it ruptures contexts and challenges the ideality of signification, organism, and subjectivation – in yet another assemblage. By fighting an apparatus of capture, this assemblage acts as a 'war machine' (Deleuze & Guattari 1980), making use of its life plan of composition, creation, and continuous variation: at the end of the day, this assemblage's plan allows becomings to pass unnoticed, thereby deterritorializing the identifications maintained by another, binary machinery. And this is how at the same time, the becoming-woman deploys a war machine and creates a world.

The very apparatus of capture brings to bear on what could be called a policy of '*faciability*'. Facebook recognizes an 'ideal face', a device resulting from an interchange between the regimes of signification and of subjectivation; even so, not

9. These two ways of dealing with variation provide the two perspectives in which Deleuze and Guattari (1980) formulate their difference between a *greater* language and a *smaller* language.

10. *Selváticas* can be viewed and read at: http://www.betofigueiroa.com.br/ensaios/ver/5/selvaticas.

everything that does not belong to the face-model represents a deviation that must be banned (Deleuze & Guattari 1980). An assemblage of power requires a faciability *policy*, requiring a face expressing acknowledgment and identification of the human face itself, along with everything entitled to it, being *made faciable*:

> This photographic essay is born as an action-art-manifesto against the sexualization of the female body. It comes to question the censure against breasts in works of art shared in the most accessed social networking website in the world. We are not naked. We are just not wearing a shirt. And this is how we also want to discuss democratization in social networking, content manipulation in communication, and the retrocession caused by giants who threat to control the internet by choosing our political and ideological consumption. (Feitosa 2015)

The technical reproducibility of the work of art clashed both with the traditional conception of the painted portrait, whose 'aura' was deemed a non-reproducible quality, and with modern photography, which was conceived of as not 'liberated' enough from tradition and rituals to properly represent the human face (Benjamin 1969 [1936]). Consequently, as the human face got emancipated from the aura, an *unfacialization* policy, inspired by technical reproducibility, came to life – even to the degree that art now underwent a certain refunctionalization, being no longer based in rituals, but rather in politics. Curiously, the face that used to be the object of a cult policy, retains its status, even as cult policies are undone.[11]

The repeatability/sharing techniques that the social networking uses to constitute itself are anchored in faciality, a 'policy of the face'. While *Selváticas* is banned, repeatability/sharing used to promote ruptures engenders new assemblages: *'junglehoods'*, for example. Such new assemblages have strategies for the promotion of ruptures; when, as in the present case, an action is repeated, the user now shares a Facebook link (consisting of an image), while the link no longer displays uncovered breasts, as it now was possible to share/repeat a becoming-'junglehood' in social networking.

'Junglehood' itself continues to be repeatable, generating more ruptures of context, signification, subjectivation, and social organization. A possible objection could be that the image is no longer repeated as often as it used to be before its being censured by the social networking website. The objection is valid, precisely because of its referring to another assemblage – a fact which points to the continuous adaptability of a becoming.

11. Note here that a policy based on repetition as structure makes a positive difference possible.

7. Conclusions

The case of *'junglehood(s)'* allowed us to underscore the difference in adaptability with regard to the social networking environment. Benjamin (1969 [1936]) pointed out that new concepts of art may serve political purposes, as technical reproducibility becomes available – the reproducibility that we read as a process of repeatability (as in the case of language, with its iterable character, and more generally, as a form of repetition) generates ruptures when coupled with alterity, 'otherness'. Within the mobile and dynamic environment of the internet – as contrasted with other environments –, this reproducibility is substantially shared, due to the practice of sharing/repeating.

This observation is needed to prevent us from referring to the internet as a mobile and dynamic environment only; the point here is the adaptability of a becoming that is mapped with an assemblage as its starting point. This becoming allows us to contemplate the adaptability of an assemblage turning its mode towards a plan of composition and creation, where organization and development are not taken as elements of prime importance; other dimensions of time and space are at issue within such an adaptability, understood *qualitatively* rather than *quantitatively*. These time/space dimensions are intensive rather than extensive, as Deleuze and Guattari (1980) might be saying. Extensiveness operates segmentations, quantities, meanings and identifications. Intensity, on the other hand, assigns difference to each qualitative submission of time and space, as we increase or decrease our capacity of existence, of becoming. Let us then be audacious and say that intensity operates the ruptures like a Derrida (1991) 'general non-absence': of aura, of signification and context, and subjectivation: it is the disruption of a metaphysics of unity.

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SECTION III

Adaptive communities of practice

CHAPTER 9

Face, conflict, and adaptability in mediated intercultural invitations

Young adults navigate complexities of ethnicity, gender, nationality and age

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In a world of increasing national and international mobility, people are progressively more engaged in communication over multiple types of media. This paper discusses the question of adaptability in mediated intercultural communication, considering the perspectives of a group of international graduate students and their peers in a graduate program in a North American university. The paper explores the relational aspects of technologically mediated "invitations" as potential face threatening acts made more complex by the unequal social positions of the participants regarding ethnicity, gender, nationality, and age. It also problematizes the nature of mediated communication and choices of communicative tools, the contradictory assessments by users as to the value of specific semiotic information, and the chronotopes of mediated invitations that intensify facework.

Keywords: intercultural communication, mediated interaction, adaptability, invitation, face

1. Introduction

In a world of increasing national and international mobility, people find themselves progressively more engaged in intercultural communication over multiple types of media and having to adapt progressively to this new situation (Blommaert & Rampton 2011). Of course, "mediated communication" has existed since we have had tools as the telephone or telegraph. However, it is only with the internet revolution and its multiple applications that we have seen so many different modalities

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emerge. In this chapter, we discuss the question of adaptability (Mey 2006) in mediated intercultural communication, considering the perspectives of a group of young international graduate students and their North American peers enrolled in a graduate program in a North American university.

In a research project on the use of social media in intercultural communications, Ribeiro and Bunning asked graduate students in an intercultural communication course to analyze the type of facework they regularly engaged in during their technologically-mediated interactions. Because invitations were the focus of many of these students' analyses, we identified this speech act as worthy of further attention. This chapter focuses on four cases of students negotiating invitations. The first is a Facebook chat between long distance friends, an American and a Bulgarian, arranging a time to speak by Skype. The second is an email exchange between a woman and her boyfriend's mother in which they try to organize an introduction of the woman's and the boyfriends' parents. Next is a Snapchat through which one neighbor invites another on a date. The final case is a Facebook chat in which siblings negotiate meeting for a meal and a workout.

We explore the relational aspects of technologically mediated interactions (Locher, Bolander, & Höhn 2015), looking specifically at "invitations" as potential face threatening acts made more complex by the unequal social positions of the participants regarding ethnicity, gender, nationality, and age. Our discussion illustrates and problematizes the nature of mediated communication, choice of communicative tool, and the relevance of certain types of semiotic information, as for example, the presence or absence of nonverbal information in texting. We also focus on how chronotopes, or timespace relationships, intensify the facework involved in mediated invitations.

2. Invitations: Face orientation and negotiation

Invitations, as we will see, involve highly complex linguistic and face work (Drew 2018; Margutti et al. 2018). Goffman's definition and discussion on *face* and *facework* (1961, 1967) inform much of our research on intercultural communication and the use of new media (Cowen, Ribeiro, & Bunning 2012; Ribeiro & Bunning 2011). Face is the socially situated identities people claim or attribute to others; face management refers to how people perform identity work: how they relate to one another and maintain or protect their interactional identities. Such work is assumed to be cooperative and reflexive: threats to the other's face are threats to one's own face. There is always an inherent interactive tension. Hence, facework for Goffman is not trivial. It is the ritual attention that people must give to one another so that interactants can be mobilized to be "self-regulating participants in social encounters" (1967: 44). The "interactional order" emerges from this ritual, which is largely cooperative: face is given by others and it must be ratified by others so that each person's best interest is to maintain the other's face.

Interactional contexts are deemed intercultural when there are differences of ethnicity, gender, language (encompassing a range of varieties in language use such as standard French vs. nonstandard French, English as a foreign language or English as L1, among others), nationality, age, hierarchy and power distance among participants. "Culture is a learned system of meanings that fosters a particular sense of shared identity and community among its group's members" (Ting-Toomey 2005: 71). Intercultural differences (of one speech community to another, to use Hymes' distinction) clearly do not generate conflict per se (Hymes 1974). Yet, such variation certainly makes language and communication more layered and participants more cautious of differences that could lead to misunderstanding and conflict (Tannen 1986). Ting-Toomey's discussion on face and intercultural conflict indicates that differences may occur not only among individuals and groups with deep-seated beliefs, but also among individuals facing a subtle mismatch of expectations in conflict, or even non-conflict scenarios. "Conflict can be either an explicit or implicit interpersonal struggle process that entails perceived incompatible values, norms, goals, face orientations, scarce resources, interactional style, and/or outcomes between two interdependent parties in an emotionally frustrating situation" (Ting-Toomey & Oetzel 2001). An interesting point in our discussion relates to differences in gender between women friends (paying more attention to friendships and relationships, therefore using more talk/texting as a way of connecting to others) and men friends (being more oriented to activities practiced together and less focusing on communication per se). While these are broad trends, they tend to prevail (as pointed out by Tannen 2017). In our data, one case holds true in this regard (case 3) while another does not (case 4). We will also see that cultures vary in degree and orientation to "self" or "other," either valuing more "self" (individually based) or valuing more "other" (community/group based), as will be displayed in case (1). Finally, one needs to point out that in face to face communication as well as in mediated communication, not all threats are resolved or all conflicts settled. Conflict is a crucial part of the social construction of reality, as Briggs (1996) alerted us to.

Now why should we be interested in invitations as a focus of inquiry? There is an interesting paradox in the nature of invitations and facework: while invitations work as *solidarity rituals* according to Goffman (1967), as they stand for actions such as compliments, that affirm and maintain a relationship, they are also interpreted as *exercitives* by Austin (1962) and *directives* by Searle (1969). Such interpretations present a contradiction: an *offer* or an *invitation* signals solidarity and relationship; yet, as a directive, it imposes the will (or wants) of the speaker on the hearer. Thus, our data indicates that an invitation – a solidarity ritual – is clearly a complex act as it conveys the intention of the speaker/writer to impose on the listener/reader an action which could threaten the relationship in various ways, since it may curtail the freedom of action and expression of the invitee in at least three ways: (1) an acceptance signals that the invitee is willing or interested to comply; (2) a non acceptance requires face protection and negotiation; (3) a lack of a response – avoidance – often causes ambiguity and discomfort for either participant (Ribeiro, Cabral Bastos, and Bunning 2015).

We will discuss traditional invitations for special occasions (such as a dinner party), as well as invitations as a preliminary strategy to propose an actual interaction. In such cases, invitations frequently take the function of an "opening" in a mediated interaction so as to assure the availability and attention of the addressee. They often occur as an asynchronous written medium of communication to prepare the addressee for an extended and more complex synchronous verbal communication via Skype, Facetime, or even face to face communication. In such cases, it seems that a synchronous interaction is really the goal. We observe, therefore, the use of mixed mediums (a mediated/asynchronous/written/text) to achieve a face to face encounter (a synchronous/verbal/conversation). These preliminary acts attest to the importance of attending to "the circumstances surrounding the utterance" – the speech event – in determining the interpretation of a specific speech act (Yule 1996). Both types – traditional invitations and invitations as preliminaries – involve significant facework, given their directive nature, and are frequently made more nuanced by the participants' social positions and differences in intercultural expectations. In mediated contexts, this interactional work gains new dimensions that we will now explore.

3. The data

The invitation data that we will be analyzing derives from faculty and student collaborations in an Intercultural Communication course at an American university over five years (fall 2010–spring 2015). Students wrote short reflection papers comparing face to face and mediated communication, taking place over Skype, email, texting, Facebook, WhatsApp, Snapchat, etc., using the ethnography of communication (Hymes 1974) and theories of face and politeness (Goffman 1959, 1967; Brown & Levinson 1978; Ting-Toomey 2005) in their analyses. Students also discussed mediated intercultural communication differences in peer group classroom interactions, in personal interviews with teaching faculty or researchers, and in focus groups (peers and faculty). Interviews and focus group discussions were recorded so they could inform the data analysis. The participant students' information has been changed to preserve anonymity. Of 150 student reflection papers, half included data and detailed analysis. Of these papers, 50% contained some type of invitation. With a narrowed focus on invitations as directives and looking at preliminary strategies to address issues of face, a few questions emerged in this qualitative study:

- How do participants negotiate face and potential conflict? How does the medium (texting) inform and affect facework and language use?
- How do participants indicate adaptability to a variety of media, specifically related to cooperative strategies and potential face threatening acts? What has shifted from everyday face to face interaction to mediated communication?
- What differences in expectations emerge in the data related to participants' status, gender, age or ethnicity? What sociolinguistic and cultural expectations may be shared, understood and conveyed so as to negotiate successfully an invitation?

In interviews, focus group discussions, reports and transcripts of data, students discuss positioning self and other (Ting-Toomey 2005), the dynamics between the collective and individual self (Kim 2002; Ting-Toomey 2005) and the dynamics of facework (Goffman 1959, 1967, 1974; De Kadt 1998; Holtgraves 2002). As to politeness strategies, we observe in our data that invitations occur in different positions. They may be introduced as a preliminary strategy, which signals that "there is more to come". They may also occur as side sequences to negotiate participants' positions and potential face threatening acts. Finally, they may occur directly without politeness, given that the medium protects the participants' face. The analysis points to (often nuanced) face conflicts, anchored on different cultural and social expectations. We discuss how this group of students analyzes potential threats and ambiguity when using direct and indirect discourse strategies (Gumperz 1982). In the following, we highlight specifically four cases and integrate key points from the larger set of data.

Case 1. Rebecca. Using preliminaries: Texting to generate a Skype conversation

The first case is a chat via Facebook in which a Skype call is arranged for a later date. Rebecca is a 35-year-old white American Jewish woman, who wrote a reflection paper about the interaction she had with Aisha, a 15-year-old white Muslim Bulgarian girl. Rebecca and Aisha were neighbors when Rebecca lived in Aisha's village in Bulgaria for two years as a Peace Corps Volunteer. The two communicated daily – face to face as neighbors in Bulgaria. However, this chat was their first communication since Rebecca returned to the U.S. two months prior. In her paper, Rebecca reported feeling guilt for not being in touch sooner.

In this chat, Aisha, initiated the communication in Bulgarian – a language they share – and conveyed her invitation for a Skype call. In Rebecca's reflection, the entire interaction is in Bulgarian, accompanied by an English translation; Rebecca's translation is presented here. She writes:

Aisha (10:34 am)
Hello
How are you?
What are you doing?
When will I see you on Skype?
:* (smiley face)
Rebecca (10:38 am)
I'm doing homework for university, and you how are you?
What is your name on Skype???? We are not friends on Skype!!
When do you start school?
Aisha (10:39 am)
June 15th
17
June
Rebecca (10:40 am)
June?
Aisha (10:40 am)
September
:D (sideways face)
Rebecca (10:41 am)
Ha!
Aisha (10:41 am)
My name on Skype is
ab8iso.8772
Rebecca (10:44 am)
I will search for you, tomorrow…when are you free?
Aisha (10:45)
Okay
Rebecca (10:49)
Tomorrow, at 5:00 pm by you…we will speak on Skype. Is that okay?
Aisha (10:50)
Becca, tomorrow I am going to Yndala
Tomorrow I am for the festival
Rebecca (10:51 am)
For a festival?
Aisha (10:52 am)
Yes

Rebecca (10:56 am)
I am free on the weekend, during Saturday or Sunday? I will write you so that you remember! And then we will decide at what time.
Aisha (10:56 am)
OK
Rebecca (10:59 am)
I miss you very much! Everyday I think about you and your family, I am waiting for next weekend!
Aisha (11:00 am)
OK
And me!

Aisha opens her message with a sequence of two greetings and a request for information (and, possibly, an implicit request for Rebecca's availability to text). In her fourth utterance, she formulates her invitation, followed by a smiley face to convey a friendly tone. This interactional work indexes the invitation as a potential face threatening act, given the cultural and age asymmetries. It also conveys an indirect complaint, alluded to in Rebecca's reflection paper. The exchange that follows the invitation captures Rebecca's efforts to negotiate face before she accepts the invitation. She answered with an account for her behavior, followed with several questions ("and how are you? What is your name on Skype? When do you start school?"). We observe that Aisha responds to the last question, but will only provide her Skype name later in the sequence, a key reference to enable mediated communication.

In her paper, Rebecca indicates the importance of shared cultural background. Because she knows that "Aisha will tell her whole family that they (will be) speaking (on Skype)," Rebecca indicates times when she knows she will be "free for at least an hour to speak with many people." For Aisha, a Skype call implies a call with many others (most likely, members of her family), denoting a shift in orientation of the participation structure towards a group oriented culture. Also for this future video conference, Aisha will visit a cousin, as her own computer has no camera, denoting how the community shares technology and resources. Rebecca also explains in her paper that if the two were communicating face to face, they would be using non-verbal actions. According to their relationship and the norms of women in the village, they "would have been reaching out and touching each other throughout. The hand contact between the two would have confirmed the mutual face-saving." In texting, graphic symbols (emoticons) often convey tone and mood (emotions). Rebecca comments that Aisha uses emoticons, but she does not, "perhaps because of her age, or lack of knowledge."

The closing is particularly interesting: when the invitation has been conveyed and accepted, the two women signal fully their emotions through intensifiers, such as the use of adverbs, time and process markers, and explicit references to the listener and self. Thus, Rebecca writes (italics are added for the analysis):

> I miss you *very much! Everyday* I think about *you and your family, I am waiting* for next weekend!

And Aisha replies

> OK
> *And me!*

In this Facebook chat, we examined how Rebecca and Aisha negotiated an invitation. Aisha's invitation is made explicit through several formulations suggesting to connect on Skype. It is implicitly an invitation to maintain their relationship, which had recently changed from close neighbors in a small town (in Bulgaria) to long-distance (Boston/Bulgaria). We also observed that the initial invitation was buffered within a series of questions and answers and side sequences regarding other issues, only to be accepted after a negotiation process. At the closing, explicit affect markers were introduced to reinforce and strengthen the relevance of their relationship and to confirm Rebecca's acceptance of this invitation.

In the next case, a student tries to facilitate a face to face meeting of future parent- in-laws.

Case 2. Winnie: An invitation via email

The second case is an invitation via email. Winnie, a US American graduate student, invites her boyfriend Phil's mother, Louise, and father, Thomas, to meet her parents on Thanksgiving, a US holiday. Prior discussion with her boyfriend had led Winnie to believe that this invitation for a late gathering over drinks would be welcomed. In fact, it was not.

In her initial email Winnie wrote:

> Hi Louise,
> Glad you liked the photos; Phil and I had a great time celebrating Halloween!
>
> I wanted to see if you and Thomas were available to come by my parent's house on Thanksgiving for a nightcap. My mom and I were thinking around 5 pm. We will have some desserts, wine and maybe a hot specialty drink!
>
> It's hard for Phil and I to believe we still have not introduced our parents. Hopefully the two of you can make it!
>
> Let me know :)
>
> Winn

In her reply, Louise stated:

> Hi Winnie:
>
> Phil and I talked about this about a week ago…we generally have family (all 5 kids/sig. others) coming in and out after the big meal. We have dessert, play Bingo, etc. So I can't possibly leave. But we would love to have your parents to our pad!??! Holidays are such a busy time. I could call your parents and invite them?
>
> If that doesn't work, perhaps we can plan a night when you and Phil aren't busy (That's the real reason this hasn't happened so far…!) and gather at the Family Funny Farm bar for some drinks and apps.
>
> Your thoughts?

In this email exchange, there is a clear conflict in expectations and the need for a delicate face negotiation, given the asymmetry in status and age and the type of personal relationship. Both participants co-created an uncomfortable social situation for each other given their different assumptions and needs. Winnie's next response and closing to this email exchange makes this explicit (italics are added for the analysis):

> Hi Louise,
>
> *I guess I am confused.* I thought you and Phil had discussed doing it Thanksgiving evening – after the parties on both ends settled down. *No worries though, just a little miscommunication.* I'll talk to my folks and see what works for them.
>
> Talk to you soon!
>
> :)

Winnie's response and closing avoid conflict by hedging, mitigating her error in interpretation and using the first-person pronoun. She uses what Ting-Toomey (2005) describes as mutual face protection in conflict situations (blaming self rather than other; using distancing, hedging and deference). She also protects her own face by assuming a perplexed position (and some ambiguity), and displaying a readiness to move on.

> I guess I am confused … I thought … No worries though, just a little miscommunication.

In her paper, Winnie stated that Louise's non-acceptance "was extremely difficult to understand," which made her turn to assumptions. If this conversation had happened face to face, she would have been better able to infer Louise's intentions "by reading her non-verbals." Winnie emphasizes that she "relies heavily on nonverbal communication" and needs to understand intonation and body language to "refrain from false assumptions." She reiterates that her "initial emotional reaction was surprise, confusion and frustration."

Though Winnie's invitation to her boyfriend's parents at Thanksgiving was not accepted, it is possible that much of the social and linguistic work involved in protecting and restoring face succeeded in maintaining the relationship with her boyfriend and in-laws. We learned later from Winnie's report and interview that "boyfriend Phil" is now her husband.

The next case presents a much less successful romantic relationship.

Case 3. Lara: Direct FTA with no face protection except for the medium

The third case is a Snapchat invitation received by Lara, an American graduate student in her 20s. Her neighbor invited her on a date in a message that simply said: "wanna go out?" For a response, Lara opted for ambiguity to save face and used avoidance strategies. She never responded. The invitation, with a high degree of face confrontation, did not include preliminaries: it was direct, explicit and brief.

When Lara received this message, Snapchat was a relatively new social app. It gives the sender the power to have the message erased almost instantly; deleting it works to protect the sender's face and possibly the receiver's. Assumptions would be that if you – as receiver – would like to "forgo" the invitation, it's fine. Just forget it. Face and conflict are discussed by Lara who writes that social norms for the use of these new apps have not yet been developed. She discusses her surprise and confusion at this invitation (which she deemed as "blunt, cowardly, rude and immature"), and which was accentuated (rather than mitigated) by the use of this, at the time of the event and reflection, new medium. She contrasted this mediated interaction with face to face invitations, which would require pre-sequences involving compliments (such as, "you're really fun," or "I like hanging out with you"). In the Snapchat presented here. the preliminary script is clearly ignored, opting for a style of communication with a higher risk of face confrontation and conflict.

Differences in gender and expectations related to friendship patterns complicate matters further. As reported by research on gender (Kendall and Tannen 2015), women tend to prefer connection and talk as a condition for friendship, while men would rather plan an activity ("wanna go out?") so as to enable a friendship. Finally, Lara's resentment, and the possible aggravation caused by this situation could be related to the social situation involving a next-door neighbor, where face engagements are obviously routine. This direct, three-word invitation to a neighbor, followed by no response, provides a sharp contrast to the more extensive interaction between siblings in the following case.

Case 4. Claire: Indirectness and side sequences to protect face among siblings

The final case is a chat on Facebook Messenger between two siblings who are six years apart in age. Claire, an American graduate student in her 20s, invites her older brother, Steve, to join her to exercise. In her reflection paper, Claire explained that she frequently invites her older brother to join her at her exercise facility and that he often remarks on his need to exercise and on his competitive work schedule. Three underlying differences between Claire and Steve inform their interaction: gender, age, and status (graduates at a more vs. less prestigious US American university); in particular, gender differences in communicative styles may also be at stake (Bourlai 2018; Tannen 1986, 2017). One would expect directness and economy of speech from young American siblings, yet we observe a longer and nuanced interaction, where participants seem to navigate a troublesome face negotiation. While texting, both participants chose to include utterances that are specific to verbal communication (such as ug, oh, hmm, well) to relay complex tones and soften their text messages.

The sequence below corresponds to independent texting turns as reported by Claire. (The italics and bold text appear in the original data as submitted by her).

Claire: what time do you think youll be leaving tomorrow morning?
Steve: ug. well, I meant to call you. I completely forgot about my group meeting tomorrow at 1pm……..**so** I cant go.
Claire: oh….well we could go like 10/11
Steve: if yo7u still want to, I think kh and Areum are going, **but you probably I have work to do I bet**
Steve: *no….I have a lot to do to prepare…..*
Steve: *another time, it will have to be*
Claire: hmm
Claire: ok
Claire: well I have to get my bag at some point tomorrow
Steve: *thanks for a lovely time at open meadow today. it was fun!*
Claire: so should i plan on seeing yall tomorrow or no? **just trying to plan**
Steve: yes. I think it would be nice at least to get coffee or dinner or something…. **although I don't think areum and Kyungha will want to also go out for dinner**. *But shall we plan on something coffee-like, maybe in the afternoon?*
Claire: alright
Claire: **maybe like** 4?
Steve: *cant make plans just yet*
Steve: *maybe*
Claire: ok
Steve: dunno

Claire: *well* im thinking ill go spin at 2
Steve: *you wont have to cook*
Steve: *don't worry*
Steve: okay
Steve : lucky you
Claire: i didnt think i had to cook haha
Claire: you should come!
Claire: just an hour
Steve: spinning yopu measn?
Claire: yep
Claire: *im assuming no*, **but figured id ask**
Steve: at 2?
Steve: probably my meeting will go to long, but maybe
Claire: ok

In this exchange, Claire offers various times to meet. Steve declines the invitation with a series of hedges and markers ("ug," "well," "probably"); he prefaces the negative "I can't go" with two explanations "I meant to call you. I completely forgot about my group meeting tomorrow." Claire restates her invitation several times, softened by modals and hypotheticals ("well, we could go"); hedges "hmm; ok; well" and shifts to placing herself as the agent ("should I plan …?"; "I'm thinking I'll go …;" I'm assuming …, I'd ask.").

This exchange takes 32 turns with inserted sequences to negotiate participants' face, while also working on a time and date in the future. These sequences are initiated by Claire "well I have to get my bag …" and Steve "thanks for the lovely time …". The juxtaposition of these two utterances (Claire's indirect request and complaint; and Steve's direct acknowledgement and compliment) display cues of opposing sets of intentions from each sibling (frustration vs. gratitude).

In her paper, Claire writes that the chat medium allowed for face repair and negotiation. By allowing significant time (after each turn) for a more thoughtful response, it triggered the use of indirectness and therefore more face protection. In this case, not being engaged in a face to face situation, created a "safer" environment for both siblings to address face (self and other) more efficiently and politely.

4. Further discussion

Considering our prior discussion, what can we say about interpersonal relationships, intercultural communication and technology in contemporary life? Or what can we say about the two interaction systems, the human and the computer (Mey and Gorayska 1994) when considering texting invitations? In the mediated interactions presented, people cope with difficult emotions, get embarrassed and frustrated, and attempt to control situations to avoid getting embarrassed and having a sense of loss of direction. They deal with difficult and subtle social acts, such as inviting and refusing invitations. In these social encounters, we observed the intense face-work performed by individuals engaged in mediated communication through Email, Snapchat and Facebook messenger with friends, family and neighbors.

Different from the face to face encounters studied by Goffman (1959, 1967, 1974), these mediated encounters are not clearly bounded by time and space; people are not in each other's physical presence, and the mutual monitoring of bodies, gestures and voices does not happen in the same way. These encounters are, however, social, and of the kind in which a great part of our social lives happens nowadays (Blommaert 2010; Blommaert et al. 2018). And we adapt to them with much face-work being performed among participants. As Tannen (2017) indicates, "social media have fundamentally changed communication and, even more deeply, ways of being in the world" (p. 182).

So, what could we say explicitly about invitations in intercultural mediated interactions as observed in our data? We noted that participants adapt and follow a few general principles. First, there is the use of *multiple medias for multiple functions in everyday life.* We mix face-to-face and electronically mediated communication, and it is now part of our communicative competence to know which media or tool to use for what purpose, and through which electronic device (cell phone, computer, tablet). This kind of knowledge underlies all the analyzed interactions.

The four cases above are all examples of using a written, asynchronous mediums of communication to establish a verbal synchronous communication, via Skype or face to face. In the cases presented here, as well as in the data analyzed in reflection papers produced by other students, to find a mutually agreeable time usually involves several participants' turns and varies greatly in the amount of time spent on the negotiation (from hours to days). Thus, the mediated interactions in the cases presented here took seconds, in the case of Snapchat; twenty-six minutes, in the case of Rebecca through Facebook messaging; and one hour and fifty-one minutes, in the case of Winnie by email. Although the invitations initiated in Claire's and Winnie's exchanges received negative responses, their relationships (with Claire's brother and Winnie's future mother-in-law) continued intact. Interestingly, another student, Anna, wrote a reflection paper explaining an instance in which she and a friend negotiated an invitation for a Skype conversation, but where the synchronous Skype communication never took place. Yet, Anna reported that the negotiation process was sufficient to maintain the relationship.

Second, just as in verbal face to face communication, *mediated interactions make use of indirectness and rely on new discourse strategies for sense-making.* If we agree that more of what is being communicated is conveyed non-verbally, what happens when participants do not have access to these visual cues? Also, if we accept that meaning is mostly conveyed indirectly (as attested by research in indirectness, politeness and face, metamessages and frames in discourse analysis), how are such contextualization cues (Gumperz 1982) conveyed (or not) in mediated communication?

Avoidance from the speaker/writer – and silence from the listener/reader's perspective – can be interpreted as the utmost indirect strategy (Tannen 1985; Kim 2002). Also, students frequently mentioned that given the pressure to respond that is felt in mediated communication, some participants opted for ambiguity and silence, as indicated by Lara: "The biggest challenge in communication is that people are now always available to chat and have become responsible for doing so." She was aware of the potential meaning of "no response," yet did not want to be obliged to always respond.

Lara's lack of response to her neighbor's invitation to go on a date was discussed as 'indirect avoidance'. In their discussion papers, other students discussed a similar lack of response as avoidance. For instance, Jane described an exchange among bridesmaids in which they all responded positively to a request from the maid of honor to collaborate on planning wedding-related events. However, none of the bridesmaids replied to a follow-up $100 request for a hotel, which was interpreted as an unreasonable price. Jane explained that this sentiment was shared by all bridesmaids, but none felt comfortable telling the maid of honor.

Different from the face-to-face encounters studied by Goffman (1961, 1967, 1974), these mediated text encounters (Snapchat, Email, Facebook messenger) lack visual and auditory contextual cues (prosody and intonation), something which is often dealt with by participants by transcribing cues in verbal language, inserting emoticons, and using emphasis markers (such as exclamation points, boldface, italics, etc.; Dresner & Herring 2010; Vandergriff 2013). To use a Goffmanian notion, in facework some of these communicative tokens are *given by* participants, who may be able to choose and control their choices. The problem is with the *given off* information: the information we get indirectly by observing body movements, face expressions, voice tones that (we assume) the other participant is not controlling. This is an important issue for participants in mediated communication, as was indicated by Winnie's frustration in understanding communication in the absence of non-verbals (case 3). Among *given off* strategies, however, we need to point out that participants do interpret 'silence': the duration of the time gap between turns in texting messages (in case 1) as well as 'avoidance strategies, when silence becomes a non response to an invitation (in case 3).

In looking at students' data, we started to ask ourselves if there is more hyperbole in mediated communication in order to compensate for the nonverbal cues that are no longer available. In Rebecca's chat with Aisha (case 1), she uses smiley faces and multiple punctuation marks in a row (???? and !!) to provide contextual clues. We also see this stylistic choice in emphasis ("I really want"), capital letters, multiple punctuation marks, emoticons, and onomatopoetic spelling. For example, in an email to housemates who have agreed to contribute to bills, the response was, "Thanks!!! Θ." In another email example, a parent complaint to a study abroad organization read: "…VERY ANGRY…VERY UPSET…why am I paying $5,000 for my daughter to go to Spain? To LOOK at the monuments FROM THE OUTSIDE??". In a conversation among friends via Whatsapp to determine a price limit for a gift exchange, participants used creative spelling to imitate the intonation they would use face-to-face:

A: "It looks like you are setting the price."
B: "I'm aaaaaaaaaasking."
A: "Yeah!!!! By impoooooooosing."

Though very little information about these interactions is provided here, it is evident that the contextualization cues that the writers have used are very effective in communicating their intentions. We pointed out a few strategies that participants readily use in everyday texting to convey not only explicit, but also implicit meaning (information *given off)*, in an attempt to codify intentions (metamessages) and to be successfully understood.

Another interesting point that emerges from the data relates to *the choice of the tool used for social media.* Snapchat had been introduced only recently, when our data was gathered. Hence norms for its use had not been sufficiently developed as indicated above (case 3). Such use has since changed, as Snapchat is now widely used by a young generation to send photos and text with efficacy, and with the certainty that the information will be deleted within 24 hours, unless a screen shot is taken. What is interesting in such a platform is precisely what it offers: expedient communication (through several media types, verbal, text, pictures, and videos), with an equally expedient deletion. What it cannot offer, however, is the "deletion" of the receiver's emotions (or what Austin would call the 'perlocutionary effect' on the hearer/reader). Sharing a photo of a party can have the unintended consequence of feeling left out; as Tannen points out, "photos have particular power because they're vivid and seem real – so real, there's a saying 'Pics, or it didn't happen'" (2017: 186). Hence, in spite of the permanent and quick deletion of information, its effect will and could remain on the receiver's mind and have unintended consequences (as reported in case 3, where it most likely hurted the neighbors' relations).

Finally, we should discuss the social situation per se (Goffman 1961), and specifically Blommaert's discussion (2017, 2018) on contextualization processes of "paramount importance": how participants engaged in mediated communication adjust face and perform identity work to successfully maintain (or not) relationships. The four social encounters involve an invitation for a talk or a meeting at a later date; they are constructed as an online social encounters projecting a second encounter (online or face to face). They involve different and looser space and time frames. All involve relationships (either starting, developing or maintaining a relationship face to face or online); all involve risk, face and potential conflict. Of interest here is the question of how space and time work across the porous lines of online/offline communication. Specifically, how does they work when we consider 'invitations with their ambiguous intentions and effect on the hearer/participant? What changes from what we know from Goffman's 'social situation'?

5. Chronotopes – intensifying tension?

The Bakhtinian concept of 'chronotope' (see Blommaert 2017, 2018) seems of relevance to clarify inherent tensions related to facework and the specific dynamics of timespace contextualization processes. For Bakhtin, from whom the concept was borrowed, chronotope was a way of addressing "the co-occurrence of events from different times and places in novels, [and] the fact that shifts between chronotopes involve shifts of an entire range of features and generates specific effects" (Blommaert & De Fina 2017). In the present analysis, an invitation, if accepted (in the present time) projects an event (in the future). Each of the four cases is constructed in a given timespace context (chronotope 1), potentially directing an action to a future timespace context (chronotope 2), with all of its assumptions and uncertainties (Blommaert et al. 2018). The superposition of these two chronotopes adds a layer of tension to the ongoing situation.

In case (1), Rebecca and Aisha's texting is located in a linear (relatively) sequential timespace relationship (for which there is a specific time/date, though the location is more fluid). They successfully negotiate facework for a future Skype encounter, which would then involve "many others" gathered in a specific location, as we have seen. Although time and space still need to be defined as well as the participation structure (chronotope 2), Rebecca and Aisha accomplished much sociolinguistic work to preserve, and mostly likely develop a new long distance relationship.

In case (2), the asynchronous Email between Winne and Louise (chronotope 1) is situated in three (or four) different chronotopes. It concerns one specific and culturally significant event (a first family meeting over Thanksgiving), situated in another timespace relationship, an evening gathering at Winnie's parents' house (chronotope 2) or a gathering at Phil's parents' house (chronotope 3). Winnie's presuppositions about Phil's parents' availability, Louise's detailed description of her Thanksgiving plans, the uncertainties about Winnie's parents' availability and the possibility of arranging a meeting on a later date (chronotope 4) generate all sorts of uneasiness.

Case (3) brings up the occurrence of an entirely different social phenomenon: a written invitation snaps away the very moment it is read (chronotope 1 is there and yet it is not). Its automatic deletion limits a texted invitation to a presence only in the reader's mind. Its trace lies in the effect it has on the viewer and its implications for future social action (a potential chronotope 2).

Finally in case (4), two siblings negotiate in the present (chronotope 1) a possible encounter the next day (chronotope 2). As Steve (the older sibling, male, higher academic status) declines the invitation of his sister, he alludes to a recent joint past event (chronotope 3) with gratitude and positive evaluation ("thanks for a lovely time at open meadow today. it was fun!"). Inserting a positive reference to a past social occasion buffers Steve's refusal. Chronotope 3 alleviates the tension of a rejection.

Of course, participants engaged in face to face communication make abundant use of the interplay of different chronotopes in everyday conversations. What is of interest here is how this interplay takes place when participants navigate different mediated communication (Text, Skype, Email, etc.) and what it accomplishes. In cases (1), (3) and (4) there is a tightness in the 'timing' of Chronotope 1, which requires almost an immediate sequential response (although each case happens slightly asynchronously). We also observe that the interplay of different chronotopes may work to intensify tensions (cases (2), (3) and (4)) or alleviate tensions (case (1) and (4)) in relation to a future social event.

Online invitations also have a 'surprise' effect. In our data, chronotope (1) – the invitation – often takes place in an open-ended situation, prior to any face engagements, as the invitees (or respondents) are oriented to their own social worlds (Rebecca is attending to her university homework; Steve is planning his own work schedule, etc.), while the writer who introduces the invitation engages them at that very moment. *Following Goffman, we would state that the invitation itself represents a request for face engagement.* The invitee (respondent) is placed in a position to accept this engagement, prior to having (or not) to accept the invitation. In Goffman's terms, this single action introduces a "lamination" (1974) that would not occur in face to face interactions.

Of course, space can be as diverse and distant as Aisha at her home rural village in Bulgaria and Rebecca at her home desk in suburban Boston. Or there may be a spatial differential within two small neighborhoods in Cambridge, Mass. for the two siblings. The specifics of space relations in chronotope (1) is often highly diverse and layered. It is from this nucleus that the invitation is made and launches a chronotope (2) which may (or not) take place in a specific future timeplace, following rules for face engagements as described by Goffman (cases 2, 3 and 4).

Our hope is that the discussion above helps clarify how much sociolinguistic work takes place when invitations are conveyed through mediated communication. Goffman's notion of 'lamination' (and its relation to social and cognitive framing) may be useful here in clarifying the layering of presuppositions and information, and their effects on others (Goffman 1974). Invitations (as they take place in our data) are first and foremost requests for face engagement; most 'arrive' unexpectedly. Second, invitations present requests which may confront the face of the respondent who must navigate the dynamics of facework, as discussed in the present chapter. Apart from this, in mediated communication, invitations add layerings (and presuppositions) regarding space (the implications of communicating either across sharply different locations/environments or right within a "next door" setting). Hence, in mediated communication, the open-ended nature of the concept of chronotope is able to capture an intensified (more laminated) and therefore more complex and tense interaction.

6. Conclusion

Differences in ethnicity, gender, age, nationality and family status engender very fluid and delicate *power asymmetries* and often require addressing intense emotional work. We see the suffering of a future (American) daughter in law for being rejected by her future mother in law, while doing a typical woman's job: promoting connections and arrangements in family life. There is also the indignation of a young woman for receiving a romantic (or sexual) invitation with no prior courtship; the embarrassment of a brother (older, male, more-prestigious university) and sister (younger, female, less prestigious university) in negotiating a get together; and the 'guilt' feelings and effort of a Jewish American woman in renewing friendship bonds and interactional ties with her younger, Bulgarian Muslim friend she left behind when traveling back to the United States.

Just as face encounters require careful interpretations, taking into account their situated meaning as Schiffrin (1990), Tannen (1984, 1986) and Gumperz (1982) attest, *mediated interactions display similar needs.* For example, case 1 (Rebecca) and case 2 (Winnie) point to very different interpretations as to the relevance of the presence of nonverbals. In case 3 (Lara), the absence of nonverbals protects face, while in case 2 (Winnie) it creates more ambiguity. As we have observed, the lack of contextual cues, of body and face expressions producing and interpreting discourse, is often dealt with by inserting emoticons, oral language expressions, and emphasis markers. This reinforces Goffman's (1959, 1967) and Garfinkel's (1967) alerts to attend to these interactions' particularities and local meaning.

Emotions are also certainly present in any mediated interaction. Such interaction is not, as sometimes suggested in the early literature on Computer Mediated Communication (CMC), a kind of discourse that privileges solely information (Locher, Bolander, & Höhn 2015). The very naming "social media" denotes its purpose and use in fostering, maintaining, and certainly exponentially amplifying relationships and networks. In fact, Tannen (among others) underscores how much more complex our worlds and relationships have become with the advent of the social media: "for many people, social media means being in an open state of communication all the time"; in some ways, these "others" are "like constant shadow presences" (2017: 182). As participants in mediated interactions, most of the time we seem to successfully find ways of adapting and navigating new forms of participation structures.

Moreover, we seem to adapt to inherently ambiguous and more layered social situations. When analyzing invitations, which often also work as conversation openers, they can be received either as welcoming bids or as intrusions. We see surprise in Rebecca's initial response, which never addresses Aisha's greeting "Hello, How are you?" and only responds to her second question ("What are you doing?"), then quickly proceeds to shift roles from responder to questioner. A complete surprise and intrusion is the sentiment from Lara for the invitation "wanna go out?", as discussed before. And a somewhat perturbed Steve is seen in his long response to his sister's opening statement and invitation "ug. well, I meant to call you. I completely forgot about my group meeting tomorrow at 1 pm ……. so I cant go." Tannen (2017) likewise points out that even "an intrusion is an unwelcome bid for connection" (p. 183). If this bid for connection presents itself as an invitation, the responder is somewhat caught in a double-bind situation (Bateson 1972): on the one hand he/she would need to be friendly so as to comply with a *solidarity ritual* (Goffman 1967) and coordinate a set of actions together (Steve responding by going to the gym with his sister; Lara being open to text back to her neighbor; Rebecca reciprocating her friend's greeting and promptly indicating a will to talk on Skype). In presenting an *offer* or an *invitation*, the speaker signals solidarity and the intention of maintaining or promoting a relationship (and in most cases, a friendship); also, an invitation could often be the first act of face engagement in a mediated interaction, hence its "surprise" effect. On the other hand, as *directives* (Searle 1969) invitations impose the will (or wants) of the speaker on the hearer, and as such, can also aggravate the effect of an intrusion. What we observe in our data is the effort responders make to attend to this paradox while preserving self and the other's face.

Invitations were a focus point for this chapter, given its saliency in our data. However, much of our analytical discussion (such as the ever more popular use of hyperbole, graphic symbols, emoticons, etc.) can also be extended and generalized to different types of speech actions and written exchanges which currently take place in mediated communication (Dresner & Herring 2010; Vandergriff 2013). As a result, we see how much more layered interactions have become and how participants use different strategies to adapt to the tools they are using, to the "shadow presence" of others, to intrusions or interruptions, hyperbole or repetitions, to graphic signals of tone and prosody, so as to avoid (or reduce the risks of) miscommunication. In mediated communication, Goffman's added 'laminations' or Bakhtin's complex sociocultural "chronotopes" (Blommaert's timespace-contextual information), when used to mediate intercultural communication, considerably raise the stakes.

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CHAPTER 10

Discussing breast cancer in cyber spaces

A pragmatic study

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The relationship between human beings and technology has raised concerns about adaptability as a major issue (Mey 2015a) in the cyber era. With a view to understanding how communication occurs in the modern world, Mey proposes four dimensions of adaptability for contemporary new technologies: the dimensions of time, place, persons and objects. In the present study, we use these dimensions to guide our analysis. Drawing on cyber-ethnographic studies (Hallett and Barber 2014; Emmanuel & Day 2011; Gebera 2008; Thomsen, Straubhaar, and Bolyard 1998), we have investigated a particular Brazilian breast cancer female patient's cyberspace discourses, while focusing on the pragmatic analysis of digital *data*. Ours is a qualitative research study (Denzin & Lincoln 2006) and the theoretical framework includes narrative studies (De Fina & Georgakopoulou 2008; Bastos 2008); studies on identity and emotions; as well as studies on context, performance and agency in discourse (Austin 1962; Pereira & Cortez 2013). The study aims to answer the following questions: (i) How is adaptability observed through patient discourses and cyber access? (ii) What identities have been constructed through a particular patient's discourses? (iii) How are emotions conveyed in the participant's discourses?

Keywords: humans and technology, adaptability, cyberspace discourse, patient identity, breast cancer

1. Introduction

Throughout the years, researchers have observed relations of adaptability between users and their technical devices. Recently, however, the relationship between human beings and technology has raised concerns about adaptability as a major issue (Mey 2015a) in the cyber era. Although we assume that, historically, each individual has been able to establish a certain level of familiarity and ease in dealing with such devices, the current boundaries between humans and machines have seemingly

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become blurred. Adaptability, then, has to do with the degree of involvement and purpose for which humans decide to use their computers in a dialectic process that integrates both independent and interacting systems, computers and humans (Mey & Gorayska 1994; Mey 2009).

This involvement has become so close that users are frequently referring to their computers metaphorically. At the end of the 20th century, Sherry Turkle stated that "just as musical instruments can be extensions of the mind's construction of sound, computers can be extensions of the mind's construction of thought" (1996: 43). As Mey (2009: 8) points out, computers have been widely characterized by the pervasive metaphor of a 'tool', to be used by humans to execute specific tasks. They have also been characterized as a 'transparent tool', a term used by the same author in 1988, with regard to the fact that computers have entered humans' routines to such an extent that the machines have become invisible. The computer has become an extension of the human body, being often compared to a 'crutch', a 'prosthesis' or 'scaffolding' (Gorayska & Mey 2004: 114; Mey 2009). It is worth noting that although these metaphors have been used according to the authors' own preferences, they have been criticized as well, either for limiting the computer's potential or for focusing on a single human capacity.

A partnership between computers and users should consider that each one has its role in interaction and cooperation. As Mey (2009) states, "the computer tail should never be allowed to wag the user dog" (2009: 13). That is, humans are in charge of deciding how and to what extent they adapt to computers and the latest electronic devices available on the market, not the other way round.

Since users are the ones who control the use of computers, the sites they navigate on the internet, and the way they interact with addressees, a new concern deriving from adaptability has been raised: that of the discourse used in computer-mediated communication (CMC). According to Cameron and Panović (2014), the texts produced in and for digital media share a characteristic: their reliance on the written, rather than the spoken language. However, discourse is generally multimodal, "combining language with non-linguistic resources like images and music" (Cameron & Panović 2014: 65).

Worldwide, the need for users to communicate with one another through computer-mediated multimodal discourses in specific virtual spaces, rather than simply through linguistic texts, has grown on a remarkable scale. Humans have shared information, opinions and stories more than ever before, as they engage in digital communities on the internet to exchange experiences or to participate in political struggles in online contexts.

With a view to understanding how communication occurs in the cyber era, Mey (2015a) proposes four dimensions of adaptability for contemporary new technologies: the dimensions of time, place, persons and objects. In the present study, we use these dimensions to guide our analysis of the participant's discourses in different cyberspaces.

In the virtual world, the emergence of online communities suggests that individuals seem to explore Internet spaces through their adaptable devices. For instance, although the number of individuals using the social media in order to join health care communities for enhancing patient-provider and patient-to-patient communication has increased (Emmanuel & Day 2011), opinions about this type of social practice may vary. As the authors assert, "health professionals are integrating the way they work with social media in an attempt to provide better care for their patients as well as information sharing" (Emmanuel & Day 2011: 23). Additionally, patient-to-patient interaction is working well in online social support groups (ibid.: 12), as it also does in a Brazilian cancer support site named *Instituto Oncoguia* (lit.'cancer guide'; www.oncoguia.org.br). Consequently, the present study aims to answer the following questions: (i) How is adaptability observed in patient discourses and cyber access? (ii) What identities have been constructed through a particular patient's discourses? (iii) How are emotions conveyed in the participant's discourses?

In order to show the virtual paths paved by participants and their performances in three different digital spaces, we have combined the discussions concerning health treatment and discourses. The theoretical framework includes narrative studies (De Fina & Georgakopoulou 2008; Bastos 2008); studies on identity and emotions; as well as studies on context, performance and agency in discourse (Austin 1962; Pereira & Cortez 2013).

We have selected and analyzed three excerpts from a single participant's discourse; the patient will be called Vitória (a pseudonym). The core objectives of this inquiry are: (i) to analyze which female breast cancer patient's identities are constructed (Langellier 2001) in Vitória's narratives, and how; (ii) to examine how discourse is constructed through emotions and as political acts; and (iii) to understand participant performance in each online context.

Drawing on cyber-ethnographic studies (Hallett & Barber 2014; Emmanuel & Day 2011; Gebera 2008; Thomsen, Straubhaar & Bolyard 1998), we have investigated this particular Brazilian breast cancer female patient's cyberspace discourses, while focusing on the pragmatic analysis of digital *data*. Ours is a qualitative research study (Denzin & Lincoln 2006) and the narrative analysis identifies elements of the canonical Labovian structure, such as orientation, complicating action, evaluation, resolution and coda (Labov & Waletzky 1967), as they have been observed from a critical perspective by Bastos (2008).

Since the "cyber streets" (Thomsen, Straubhaar, and Bolyard 1998) have become a potential space for manifestations of any kind, Vitória selects statements and stories, and recounts them in the spaces she navigates. Each story invites a singular appraisal of events as well as distinct identifications, emotional reactions, and motivations to act. Once emotions are shared, this contributes "to the construction of emotional communities with concomitant feelings of identification, belonging and solidarity" (Hagemann 2015: 1).

2. Discourses from the cyber spaces

The concept of *discourse* has been used by numerous academic disciplines, such as linguistics, Critical Theory, sociology, and philosophy. As a result, some confusion has arisen, Cameron and Panović (2014) argue regarding the meaning of the term, sinnce scholars from distinct theoretical traditions may not define 'discourse' the same way. For this reason, the same authors assert that "discourse analysis is an interdisciplinary enterprise, influenced by ideas from more than one tradition" (2014: 19).

Cameron and Panović (2014: 19–20) further identify three definitions of discourse from different academic traditions: (i) discourse is 'language beyond the sentence'; (ii) discourse is 'language in use'; and (iii) discourse is a form of social practice in which language plays a central role.

The first definition, "discourse is language beyond the sentence", was formulated by scholars within the area of linguistics, and aims to both describe and explain the way language functions as a system. The connections from basic units to more complex levels of structures are fundamental in this tradition's analysis of discourse. Phonology and syntax are understood in terms of their own units and rules. The complexity of units increases from sounds and words to sentences and texts, the latter presenting structural patterns for linguistic analysis. However, this view of language has been questioned by Widdowson (1995; cited by Cameron & Panović 2014: 22). Widdowson objects to the premise that texts must be larger than one sentence; actually, they can consist of a single word or letter, such as the wording LADIES on public lavatory doors, or the capital letter P to indicate car parking in Britain and many other countries. Since a single a word or letter can convey a message in a specific context (depending, of course, on our real-world knowledge), they can be considered texts. Here, Cameron and Panović argue, "an interest in what and how language communicates is an essential feature of discourse analysis" (2014: 23).

The second definition of discourse mentioned above (and considered superior by Cameron & Panović 2014: 23) states that "discourse is language in use". It is the broadest of the three, and its implicit 'social' orientation suggests no interest in linguistic forms, but rather in which purposes, and whose, language serves in specific contexts. As this definition focuses on the social aspect of language, it is welcomed by discourse analysts from a wide variety of disciplines. Whereas those interested in linguistics were more likely to center their analysis on the relationship between form and function, researchers with a greater interest in humanities s understand discourse analysis as a way of comprehending aspects of social life. With its emphasis on the social, this second definition overlaps to a certain degree with the third.

Although this third definition, "discourse is a form of social practice in which language plays a central role", comes from social theory rather than linguistics, many linguists have been influenced by this view of discourse. Cameron and Panović (2014) state that social scientists have always been interested in people's attitudes, experiences, beliefs and practices; this research deals not only with spoken discourse, but the participants' and researchers' interaction with the social media relies on written language as well. Rather than being interested in its linguistic aspects, the majority of the researchers are concerned about discourse in order to better understand the social phenomena experienced by the participants. As Cameron and Panović point out, for social scientists, "language is simply a vehicle for transmitting the relevant information from the subject to the researcher" (2014: 24); their preferred approach to discourse is by content analysis, which means extracting and analyzing the information 'contained' in texts. By contrast, when we, as linguistic analysts, analyze our online data in this research, the focus is not only on the content of texts, but also on the writers' linguistic choices for formulating their discourses. However, even though we recognize the importance of the linguistic forms for mediating the discourses as the social practices that the participants produce, our concern goes beyond linguistic forms.

Finally, discourse analysts generally recognize four main types of discourses, namely, argumentation, description, exposition, and narrative. The latter feature is central to the present study, since Vitória narrates experiences of prejudice and political struggle that are considered pertinent for our research.

2.1 Narratives of illness

Catherine Riessman (2008) has provided a succinct definition of narrative, which has been adopted by different disciplines; it describes this unit of discourse as a connection of "events into a sequence that is consequential for later action and for the meanings that the speaker wants listeners to take away from the story" (p. 3). Such stories are based on a selection of events that are organized, linked and evaluated for each specific audience at moments in history. Narratives are understood by Polkinghorne (1988: 1; cited in Anderson 1997) as "the primary form by which human experience is made meaningful" in stories. Narratives are an instrument in the construction of reality; through narratives, human beings organize and share their experiences. Their actions and experiences make sense through their relations with other people and general themes (Schiffrin 1996).

According to Riessman (2008: 8), narratives can serve different *purposes*, both for individuals (in remembering, arguing, or justifying, or to persuade, engage, entertain, and even mislead an audience), and for groups, by mobilizing people and fostering a sense of belonging (there may of course be some overlap). The author also lists at least seven corresponding *functions* of narrative: (1) in therapeutic settings and life writing, stories serve to excavate and reassess memories; (2) narrators argue with stories; (3) all storytelling involves persuading an audience that may be skeptical; (4) storytelling engages an audience in the experience of the narrator; (5) the act of telling stories may be used as a form of entertainment; (6) stories can function to mislead an audience; and (7) stories can mobilize others into progressive action for social change.

One of the contemporary modes of personal expression, not only concerning news about a cancer patient's treatment and her/his life stories, but also their biomedical dissatisfaction is by posting on the web. Lately, "the popularity of the 'personal', and 'narrative' or story of experience" (Riessman 2002: 2), including the stories told by participants in interviews and medical consultations, has become a subject of great interest for social researchers.

Riessman (2008: 14) further argues that the 'narrative turn' in the human sciences, the point at which scholars began to treat narratives as objects for detailed study, has been shaped by four movements since the 1960s: (1) the critique voiced in social science of positivist modes of inquiry; (2) the 'memoir boom' in popular culture and literature; (3) the new 'identity movements – emancipation efforts by people of color, women, gays and lesbians, and other marginalized groups; and (4) the burgeoning therapeutic culture – exploration of personal life in therapies of various kinds. Riessman (2002: 2) highlights the contribution of other post-World War II events: "the development of miniature recording technologies, the impact of recorded testimonies of survivors of state-sponsored violence and, in the post-Soviet era, the turn away from class analysis". The first point made by this author particularly interests us, since it confirms the fact that new available devices and technologies provide the possibility of language and body manifestations, not only through written texts, but also orally, and by using images and videos in addition to traditional face-to-face conversation.

Interpreting Labov and Waletzky's framework in terms of the link between narrative and personal experience, Bamberg (1997) points to a tension between two approaches to narrative and narrative analysis: a more traditional one that focuses on structures, and a performance-based pragmatic approach, characteristic of more recent narrative analysis; actually, in practice, a range of approaches may be combined for narrative analysis. Thus, Riessman (2005) has put forward four models for narrative analysis in the field of health and illness: (i) thematic analysis; (ii) structural analysis; (iii) interactional analysis; and (iv) performative analysis.

Our analysis of the online data in Section 5 combines different approaches for analyzing each excerpt. We combine the thematic and structural approaches to analyze the first excerpt, which is a narrative posted on a website. The analysis of the second excerpt, which is text from a video, is mainly based on a performative analysis which is appropriate to understanding Vitória's discourses. These discourses move beyond the spoken and written words and are seen as performance by a 'self" that "involves, persuades, and (perhaps) moves an audience through language and gesture, 'doing' rather than telling alone" (Riessman 2005: 5). And the analysis of the third excerpt, a narrative that is interrupted by a political claim on the same video, is based on the thematic, structural and performative approaches.

2.2 Agency in discourse

With regard to agency in discourse, Riessman (2002) believes that illness narratives are opportunities for the patient to assert agency and voice. That is to say, patients have the chance to express themselves through discourse, and involve their audiences while telling their stories. Kleres (2010: 193) adds that "agency is not simply attributed in narratives, but actors are being constructed at the same time. Specifically, this refers to contingent constructions of identities in narrative – a pivotal basis for emotional experience". Sociocultural linguistic studies argue that agency is not just the result of individual action, but that it is distributed among several social actors, intersubjectively, as a co-constructed joined activity (Bucholtz & Hall 2005; Pereira & Cortez 2013).

We believe that agency is also often regulated by the internet spaces and the users visiting them. Like institutional and spontaneous contexts in the real world, virtual spaces also have peculiarities, some being more regulated, others less (Oliveira & Bastos 2001). As a consequence, the possibility to adapt to spaces on the web seems to be directly linked to the users' need to take on a more agentive role while expressing themselves. In our study, Vitória's agency in discourse is more clearly observed in the spaces she has created for herself than in her statements posted on the Oncoguia institutional website. She even invites the Oncoguia audience to access the two other online spaces she manages.

3. Dimensions of adaptability: Vitória and the cyberspaces

In order to better understand our research *corpus*, we have considered the four 'dimensions' of adaptability presented by Jacob L. Mey (2015a) in his recent studies on this theme, namely, time, place, persons, and objects. These dimensions of adaptability to contemporary technologies have guided our understanding of the participant modes of communication in cyberspace that the current research is investigating.

In fact, by analyzing Mey's four dimensions, we observed some levels of adaptability, first, with regard to tools such as computers, smartphones, or tablets, and, second, to the spaces which our participant navigates at a particular time; these can vary from fashion forums, gaming and entertainment websites to cancer victims' fan pages, social support communities, and blogs. In this study, the main spaces Vitória visits and where she leaves statements concerning her breast cancer illness, are the Oncoguia website, her fan page on Facebook entitled "Tenho câncer, e daí?" ("I have cancer, now what?"), and her YouTube channel called "Em frente – Enfrente" ("Ahead – Face it").

3.1 Dimensions of time and place (Mey 2015a)

The time dimension focuses on the changes in time and our adaptation to these changes; it makes us realize that the behavior of a cancer patient in the 21st century is not the same as that of such a patient several decades ago. Statistically, 90% of the Brazilian patient population with Internet access search for the most up to date information on their illnesses by following an array of links.

The place dimension has to do with the places we live in and visit; it shows that the access to foreign communities facilitated by the internet has greatly extended cancer patients' awareness to contexts other than their own, local ones. For instance, patients from different states and countries now access each other's blogs in order to follow treatment routines and experiences.

Since time and place dimensions are related to the situated contexts people communicate in, prior to analyzing Vitória's discourses we will discuss their temporal and local context.

3.1.1 *Context*

With regard to the theory of speech acts, Mey (2014) suggests that the force of indirect speech acts relates to the situation in which the words are spoken, as much as it does to the speaker's intentions. This implies that in order to be understood, speech acts should be situated: they are *pragmatic* acts; hence, the individual speech acts only make sense within a particular context. Moreover, the situation should be understood as a constantly changing interactional process in which the participants actively construct meaning. In this process, Mey argues that the dimensions of space and time are important inasmuch as they constitute the structure in which pragmatic acts can be inserted. Such acts "incorporate some of this spatiotemporal character by loosening the constraints on 'canonicity' and subverting the speaker-only orientation" (Mey 2015b: 18). According to this author, "'sequentiality' is therefore a main constituent of our pragmatic text activities and a necessary precondition for understanding and handling of text-in-world" (Mey 2015b: 17).

The dynamic nature of the context, as described by Mey (2014, 2015b), associates his understanding of place and time dimensions to the term "land-borne situated discourse", LBSD, coined by the Chinese linguist Yueguo Gu (2010). It is fundamental to situate discourses in time and space if one wishes to understand the purposes language is being used for in a specific context.

While interacting on the web, patients' discourses shape and are shaped by each context (Fabrício 2014; see also Mey 2014; Gu 2010; Kecskes 2000, as cited in Mey 2014). Such discourses are instrumental in shaping the widespread cancer support communities that have sprung up in cyberspace; Vitória's discourses are aligned to these contexts. In the analysis sections below, we can observe that although it is not a rule, the stories she tells and the tone of her discourse follow certain patterns and characteristics. For instance, in the online institutional contexts we notice the predominance of discourses based on emotions, whereas in digital private contexts, the majority of discourses focus on the political struggle for cancer patients' rights.

3.2 Dimensions of persons and objects (Mey 2015a)

The persons dimension, which relates to the socially-bound aspect of adaptation, takes into account interactions between persons from different cultures. This demands some effort for communication to occur. Local and global differences may require distinct levels of personal involvement, as cancer patients from all over the world interact to discover more about the latest findings concerning their disease; also, becoming a member of a support community may give their lives a new direction.

The objects dimension comprises computers and other electronic devices, which require our powers of adaptation to master the human-computer partnership. This adaptability may be observed when cancer patients individually choose which devices and social media to use for digital interaction and research.

3.2.1 *Vitória*

In at least three Internet spaces, Vitória, being a Brazilian female in her late thirties, describes herself as a contemporary woman who enjoys the facility of the web and is constantly online. Vitória claims to be someone who appreciates the arts, even though her major had been in Business Administration. At the time of writing, Vitória, who pictures herself as being at ease with technology, comfortably managed her Facebook page, posting regular updates.

Although dedicated to her administrative position in a company in São Paulo, Vitória was also married and had an eight-year-old son. However, at the beginning of 2009 Vitória's marriage ended, and just two months after her separation, at age 36, she discovered she had cancer – a circumstance which irreversibly changed the course of her life.

After this, a further online space was needed to accommodate Vitória's new situation: a Facebook fan page, where her friends, family and fans could find information about her health, treatment and social life. Vitória's breast cancer was the same disease that her mother (who passed away in 2009 at the age of 59) had developed. Vitória began the new phase in her life by campaigning for greater awareness of breast cancer, becoming more politically engaged and spreading emotive messages of hope online. Henceforth, Vitória started using Internet spaces mainly to register the changes in her life style, and to narrate stories concerning her cancer treatment, all the time fighting the difficulties faced by an ordinary cancer patient in Brazil.

Another major space Vitória participated in was the website of the Oncoguia Institute, a non-governmental organization that supports cancer patients, their families and friends. Relating her experiences on the website, Vitória showed that, in her case, the Internet provided her with new contexts to express herself.

In 2013, Vitória gave an interview on the Oncoguia website discussing the creation of her fan page "Tenho câncer, e daí?" ("I have cancer, so where do I go from here?"). This page arose from the need for an online space to fight against the stigma surrounding cancer as a metaphor for death, and to combat the attitudes of both society and health insurance companies towards cancer and cancer patients. As such, Vitória used this page to demand political change.

In Brazil, breast cancer (though occurring relatively seldom before the age of thirty-five), is still the second most common type of cancer to strike women. At the time of writing, the estimated number of new cases has already reached 57,960, according to the INCA (Instituto Nacional de Câncer José Alencar Gomes da Silva 2016), a renowned Federal center for cancer research and for treatment of cancer patients. Treatments for breast cancer generally include radiation, chemotherapy, mastectomy and psychological care. (Female) patients often experience "a biographical disruption of physical and emotional integrity, threatening death, marking women's lives, and changing their sense of personal and social identity" (Langellier 2001: 146). In addition to the damage caused by the disease, cancer patients often do not receive the required treatments and medication from the public health system. In many Brazilian states, not all kinds of clinical examinations are available for cancer patients. Moreover, many cancer patients report being marginalized by society and treated as suffering from a disease viewed as inherently fatal.

By the end of 2014, in need of a new digital space to post videos related to the battle against cancer and in response to her growing audience, Vitória created a channel on YouTube called "Em frente – Enfrente" ("Ahead – Face it"). Once more, Vitória showed her engagement in the cancer struggle, as well as being ready to use the technology to interact with the other sufferers who frequently left her online messages as well as stories.

3.2.2 *Identities and performance*

Discussions about identity are typical of studies in Anthropology, Psychology and Sociology; however, for the present study, it is the contributions from Applied Linguistics which best elucidate the relationship between (re)construction of identities and narratives. As it was for Moita Lopes (2001: 63), what matters to us is "the role played by narratives in the construction of social identities through narrative practice in which people engage in social life, and in such discursive practice, construct themselves and others". Our view of identity is not limited to an identity acquired once for all at birth; on the contrary, we share Judith Butler's concept of identity as free-floating, not connected to an 'essence', but rather as a 'performance' (Butler 1990). According to this author, our identities, even though gendered, do not express some authentic 'inner core' self, but are the result of the dramatic effects of our performances. Following this conception of identity, we may observe that in our daily lives, we are constantly involved in social practices of meaning constructions and (re)constructions of our own identities. Likewise, Riessman (2005) states that for studies of communication practices and individual identity construction, the performative view is relevant since narrators "involve the audience in 'doing' their identities" (2005: 5).

Langellier (2001) points out that, from the perspective of performance and performativity, the analysis of narrative is not only semantic, involving the interpretation of meanings, but must also be pragmatic, by analyzing the struggle over meanings and the conditions and consequences of telling a story in a particular way.

It is natural to comprehend narratives as a way of (re)constructing our social identities. In addition, we believe that identity is created in interaction, in conversation, and that it is always culturally and historically situated. This understanding opposes the idea that anyone could have an essential, stable identity.

With relation to identities and narratives, we may add that storytelling is a way of establishing power relations, legitimizing certain social identities and not others. In this sense, the narrator controls the social reality constructed and the characters involved (Moita Lopes 2001). We conclude that storytelling is a form of action that can be reinforced by the theory of speech/pragmatic acts and by the concept of performative language, which highlights that to *say* something is to *do* something (Austin 1962).

3.2.3 *Emotions*

An important function of a narrative that we cannot neglect is that they may evoke emotions. According to Hagemann (2015: 1), "Emotional narratives constitute self-other relations and regulate how we perceive others, feel about them and how we are expected to treat them." Although emotions have been discussed in many disciplines, among which language and literary studies, sociology, psychology, and political sciences, it remains hard to define emotions. Approaches towards the conceptualization of emotions vary substantially. However, despite their differences, these concepts share two basic assumptions concerning the comprehension of emotions: "First, emotions involve an evaluative dimension directed towards an object, a person, a situation or an event (intentional character) (…) A second common feature of emotions is their motivational dynamic" (Hagemann 2015: 11). Consequently, one finds two main strands of emotion research: cognitive linguistic vs. constructionist. While the first strand proposes "to analyze emotions as semantic categories, it does not take full account of the fact that people can and in fact do use emotion words in different ways and in different contexts" (Galasinski 2004: 5). By contrast, the second strand, constructionism, positions emotions "as contextually embedded social practice" and "being inextricably linked to language, or (more accurately) the discursive practices associated with them" (ibid. 2004: 5). Although both strands share the understanding that emotions vary across cultures, only the constructionist approach to emotions fully takes into account the context of interaction in which people become emotional.

Lupton likewise asserts that "emotions are phenomena that are shaped, experienced and interpreted through social and cultural practices" (Lupton 1998: 2). The author argues that viewing emotions as discursive practice appeals to a dimension of emotional experience that accounts for the representation of "bodily sensations into language" (1998: 24): an experience lived by individuals, consonant with their own comprehension of experiences within the social context. Being influenced by the works of Foucault and Derrida, this poststructuralist perspective puts emphasis on discourse, and has as its "central argument the constitutive role played by language" (Lupton 1998: 24) As Fairclough (1992: 64, quoted by Lupton 1998: 4) points out, “discourse is a practice not just of representing the world, but of signifying the world, constituting and constructing the world in meaning”. Clearly, on this view of emotions as discursive practice, the “poststructuralist approaches to the emotions … privilege the role played by language and other cultural artifacts in the construction and experience of emotions” (Lupton 1998: 25).

4. Cyberethnography

Cyberethnography is concerned with how individuals and groups (inter)act in cyberspaces. As Keeley-Browne (2011) points out, this research methodology (emerging as a method to investigate the “cyber streets”; Thomsen, Straubhaar, and Bolyard 1998) is part of the move to reconceptualize the notion of ‘the field’ as adopted by traditional ethnographers. In cyberspace, the field can be observed from anywhere, inasmuch as its boundaries are free from being determined by the local or global geography. This is one of the reasons why online research requires involvement and persistence from the researcher (Thomsen, Straubhaar and Bolyard 1998).

As Hallett and Barber argue, “studying a group of people in their ‘natural habitat’ now includes their ‘online habitat’” (2014: 306). Since we believe that online spaces have become central in people’s lives, we decided to focus our investigation on what happens in the virtual world with regard to adaptability and discourses. The three digital spaces for collecting our data (the Oncoguia website, our participant Vitória’s fan page on Facebook, and a YouTube channel also created by her) was informed by the participant herself, who led us online and guided us through the online environments to which she contributes.

5. Using social media to express oneself in cyberspace

In this section, we analyze three excerpts from the different digital spaces. The first excerpt, 5.1, is a narrative posted on the Oncoguia website. As we may observe, at the beginning of the narrative, Vitória describes her reaction when she was informed of her breast cancer. Afterwards, Vitória describes the way in which she decided to face her new life as a cancer patient and, at the end of the excerpt, suggests that she has overcome the initial difficulties of her medical treatment. Excerpts 5.2 and 5.3 are extracts from a video posted both on Vitória’s Facebook fan page and her YouTube channel. (All translations are ours).

5.1 If I'm going to die, I'm not going out without a battle

Source: Oncoguia website

First, I couldn't believe it was true. And the first question that comes to our minds appeared: "DOCTOR, ARE YOU SURE?" I went to another doctor's to check his diagnosis.

In the first week I couldn't sleep… I couldn't eat… I only cried. And the second question appeared: "WHY ME?" At the very beginning, with the first impact, I was sure of two things only:

1) I WANT TO LIVE;

2) I AM GOING TO DIE.

If the fury wouldn't solve my problem, I decided to struggle to live. Then I thought: IF I'M GOING TO DIE, I'M NOT GOING OUT WITHOUT A BATTLE. IF I CAN'T FIGHT AGAINST THE ENEMY, I AM GOING TO JOIN HIM. I decided to read, look for info, study the issue, know more about my illness and get ready for the battle. At the same time, I also started a psychotherapy treatment that was certainly what gave me the emotional and rational support to deal with everything.

Now, I have a Fan Page on Facebook to interact that brought me many pleasant surprises. I have plans, including the publishing of a book. I give lectures about challenges and work as a volunteer in the cancer field (handkerchiefs, hats, wigs). It may seem ironic but cancer has brought me great things, despite the pain cause by the treatment.

Vitória narrates a trajectory of her life, from the first moment she discovered she had breast cancer until the time she became involved in campaigns, raising awareness about cancer and sharing personal stories on the web. Kleres (2010) states that narrative analysis generally does not focus on emotions. However, the author also states that "narratives are inextricably emotionally structured" (2010: 183). In Vitória's narrative, a linguistic performance of emotions is constructed throughout the trajectory of her cancer discovery.

As Labov-inspired studies argue, evaluation is an element of the narrative that may permeate the whole story. Vitória, then, evaluates the complicating action of her narrative by using the sentence *I couldn't believe it was true!* (01) before revealing the diagnosis. In doing this, Vitória raises expectations, and creates dramatic tension by involving her audience in the story. At the beginning of the complicating action, Vitória narrates the moment when the doctor revealed the diagnosis. By using the possessive adjective *our* (01), Vitória once again involves the audience, creating a sense of shared understanding. As such, the use of the person deixis *our* (instead of *my*) in *the first question that comes to our minds showed up* (01), captures and retains the audience's attention. Also, the use of direct speech and capital letters in *"DOCTOR, ARE YOU SURE?"* (02) increases the dramatic element (Goffman 1974) of the theatrical narrative told by Vitória. Moreover, she describes her suffering after becoming aware of her illness by a sequence of linguistic manifestations (Kleres 2010) of personal behavior *I couldn't sleep… I couldn't eat… I only cried* (03); this, combined with the capital letters in the question *"WHY ME?"* (04), indicates her mental and physical disturbance at being 'selected' to receive the diagnosis and face its consequences. Although Vitória deeply wishes to live, as emphasized by the use of capital letters: *1) I WANT TO LIVE* (05), she is also aware of her death, when she writes: *2) I AM GOING TO DIE* (06). Vitória had already witnessed her mother's death from breast cancer and, at the moment of writing, she felt like cancer's most recent victim.

Vitória's first reactions upon discovering her breast cancer involve her audience in the story, addressing them as equals, as well as potential victims of the disease. In the first part of the narrative, Vitória shares her pain and sadness. These emotional links established by Vitória with her readers reflect what Tannen (1989) has called 'involvement'. Bastos (2005) adds that not only is telling stories one of the most effective strategies for creating involvement, but it is also a performance through which people construct themselves and their relationships to others.

This narrative of personal experience reinforces the idea put forth by Riessman (2002) that illness narratives are opportunities for patients to be assertive. Although Vitória's audience, inasmuch as they are cancer patients, may have identified with her initial suffering as a common reaction, her statement *If the fury wouldn't solve my problem, I decided to struggle to live* (08). Here, she displays force and courage to face the cancer treatment and its physical, mental, social and political consequences (discussed above in Sections 5.2 and 5.3). Vitória starts constructing her identity as a strong woman who is able to surpass all pain brought on by her illness and to survive. Her discourse is warrior-like in nature: *IF I'M GOING TO DIE, I'M NOT GOING OUT WITHOUT A BATTLE. IF I CAN'T FIGHT AGAINST THE ENEMY, I AM GOING TO JOIN HIM* (09–10). This warrior leaves her fears aside and faces her most terrifying *ENEMY*, cancer (also personified by the person deixis *HIM*).

Vitória's personal narrative features the two main characteristics of a life story as described by Linde (1993). First, it makes a point about the speaker's, that is Vitória's, agentive profile: a person who is metamorphosing from a victimized woman into an active one. When she states *I decided to read, look for info, study the issue, know more about my illness and get ready for the battle* (10–11), the action verbs used by Vitória demonstrate agency. Second, also according to Linde, a life story should have extended 'reportability'; that is, they are 'tellable' and may thus be told and retold for a long period of time. Vitória's life story of illness and hope was told in different spaces, both on the web and outside of it, to a large number of addressees.

In Labov's terms, the analysis of Vitória's narrative shows the paths taken following her reaction to what first seemed an irreversible progression. She informs her audience that through her adaptability (Mey 2015a) to new technologies and online spaces, she started to manage her own web page: *Now, I have a Fan Page on Facebook to interact that brought me many good surprises.* (13). She also evaluates (Labov & Waletzky 1967) the use of a new space by recounting that it brought her *good surprises*. Vitória furthermore uses direct speech to mention future plans and ongoing projects: *I have plans, including the publishing of a book. I give lectures about challenges and work as a volunteer in the cancer field (handkerchiefs, hats, wigs)* (14–16). Such projects include turning her illness condition to some advantage, as she declares *It may seem ironical but cancer has brought me great things, despite the pain caused by the treatment* (16–17), and evaluates her post-cancer social practices paradoxically as *great* and *ironical*. The final evaluation in this narrative posted on the Oncoguia institutional website indicates that Vitória's new social practices were significant to her; even so, the use of the adjective *great* in her evaluation seems to be more aligned to a cancer support website than to a patient's discourse (Oliveira & Bastos 2001). A general thematic analysis (Riessman 2005) of this narrative indicates that it shifts from a narrative of illness and pain into a narrative of hope and survival, thereby becoming able to inspire others and overcome adversity.

5.2 I'm going through a basic transformation

Sources: Fan Page "Tenho câncer, e daí?" ("I have cancer, so where do I go from here?")
YouTube channel "Em frente – Enfrente" ("Ahead – Face it")

The following excerpt was taken from a video posted on two different digital spaces on April Fool's Day, a day when Brazilians, like many other nationals, typically play jokes on one another. Before recording the video entitled "Um cancer de mentirinha" ("A tricky cancer"), Vitória dressed up, put on a lot of cosmetics, a long-haired wig and a breast prosthesis. Although her physical appearance had changed owing to the chemotherapy and other cancer treatments' side effects, Vitória's social attributes and household tasks as a Brazilian citizen, mother, and daughter remained the same. Thus, while constructing the discourse of normality through verbal language, she deconstructs her image of normality through body language. The whole video lasts 9'51''. (Due to limitations of space, the excerpt selected here, which announces Vitória's transformations, lasts only 50 seconds).

((Vitória is nicely dressed. She has put on a lot of makeup: filled in her eyebrows, put on some red lipstick, fake eyelashes, eyeshadow and blush. Vitória has also had her nails painted red and put on a straight, layered wig.)) And it's very interesting because <while we are talking>, I'm going through a basic transformation so that you can see what is cool about life ((Vitória takes some makeup-remover wipes.)), it happens in nuances. PEOPLE, they are not simply what you see. ((She starts removing her makeup.)). Sometimes we look at a beautiful body, a beautiful eye, we look at people on the streets either laughing or crying and we aren't aware of their true daily lives. The MOST significant complaint I receive from the people who write to me is that they aren't seen, or they see their bodies but do not see their souls. They don't know what happens to them day by day.

Vitória uses a multimodal discourse to announce a physical transformation. Her performance on the video posted on her fan page and on her YouTube channel aims at a bigger audience, in comparison to the number of people who access the Oncoguia website that excerpt 5.1 was taken from. Vitória constructs her discourse while she deconstructs the image of a 'normal' person. So, the "marks" on her body (Langellier 2001) become visible for anyone, as she removes the artificial veneer from her injured and mutilated body. She shows her audience that (besides being politically engaged) she is strong enough to face the cancer treatment.

Actually, Vitória's discourse of normality creates a paradox with her nonstandard dramatic performance of a cancer survivor: in the course of the video, her pride of being a warrior mounts every time she removes part of her costume. First, all of the makeup goes; then, the eyelashes and wig; and, finally, the left-breast prosthesis. Vitória's free-floating identity is constructed from a "performance" (Butler 1990) of courage.

When Vitória says "*The MOST significant complaint I receive from the people who write to me is that they aren't seen, or they see their bodies but do not see their souls*" (08–10), we may infer from the dimension of persons that not only is adaptability (Mey 2015a) linked to the partnership between Vitória and her 'tools', but it also links up with other Brazilian cancer patients' social practice. They interact, share life stories, and join health care communities in virtual spaces (Emmanuel and Day 2011).

5.3 Cancer patients have the right to be in priority lines

Sources: FanPage "Tenho câncer, e daí?" ("I have cancer, so where do I go from here?")
YouTube channel "Em frente – Enfrente" ("Ahead – Face it")

The next excerpt, which lasts 45 seconds, also belongs to the video posted on the web on April Fool's Day; its theme is 'cancer patients' rights'.

01 When I am in a priority line, because if you do NOT know, cancer patients have the
02 right to be in priority lines. There, on the sign, there's ONLY the drawings of
03 people in wheelchairs, there's only the pregnant and there's only the elderly.
04 There's not a bald person or someone with a handkerchief on their head. >But
05 cancer patients- the cancer patient is a priority patient IS a priority customer. < The
06 patient has the right to access lines before others, he doesn't need to be in lines.
07 And EVERY time I get somewhere and try to get in a priority line, people stare at
08 me ((Vitória mimics people staring at her)), whisper, gossip, complain or state
09 dissatisfaction or look at me and think "Poor woman!"

The analysis of this excerpt reveals that Vitória abruptly interrupts the orientation of her own personal narrative *When I am in a priority line* (01) to project a politically engaged image through her militant discourse, consonant with Austin's performative view of language, in which to *say* something is to *do* something (1962). Vitória's complaint concerning cancer patients' rights to be in priority lines calls attention to Brazilian signs as they appear in public and private places. She mentions *people in wheelchairs, pregnant* women and *elderly* (02–03) to involve her audience in the prejudice suffered by cancer patients as she includes them in minority social groups (Bastos 2008).

Vitória brings the issue of *priority signs* up for discussion; because of this, it is necessary to know more about the context. As Mey (2014) and Gu (2010) argue, it is indispensable to situate discourses in time and space so as to fully understand the purposes language is being used for in a specific context. In Brazil, although people know that the elderly, pregnant women, mothers carrying babies, and disabled people have priority when accessing most public services, signs must be explicitly placed in public and private places like train stations, buses, banks and supermarkets, in order to be respected by a sufficient number of people. When Vitória complains about the absence of a sign specifically indicating cancer patients, she is also complaining about Brazilians' lack of respect for the public order.

Having lectured her audience on existing priority rights, Vitória finally completes the narrative's orientation *And EVERY time I get somewhere and try to be in a priority line* (06–07) and progresses towards the complicating action, *people stare at me* ((Vitória mimics people staring at her)), *whisper, gossip, complain or state dissatisfaction or look at me and think "Poor woman!"* (07–08). She clearly shows her unhappiness with people's attitudes by enumerating a sequence of 'annoying' verbs: *stare, whisper, gossip* and *complain*.

In this excerpt, Vitória's identity is constructed along the political dimension, even when her emotional integrity is threatened (Langellier 2001). As Kleres (2010: 183) argues, "narratives are inextricably emotionally structured", and once Vitória starts complaining about the inquisitive way people look at her, sadness seems to come to the fore. Registering her dissatisfaction on the web is evidence of her discontentment.

Vitória's discourse of awareness and denouncing reflects, respectively, the lack of information about cancer patients' rights in Brazilian public life and the prejudice suffered by these patients. Her personal narrative forcefully illustrates what Langellier points to as "changing [one's] sense of personal and social identity" (2001: 146). As the result of individual action, intersubjectively distributed over several social actors as a co-constructed joined activity (Bucholtz & Hall 2005; Pereira & Cortez 2013), Vitória's complaint demonstrates her agency in discourse. Not only does Vitória share a personal event, but she also informs other public actors about their common citizens' rights.

6. Concluding remarks

The contemporary world has developed a near-universal technological culture based on communication with the aid of powerful technological devices. In Brazil, of the recent facilities available on the Internet, the main devices used for communication purposes have been computers and cell phones. Consequently, in Brazil as elsewhere on the globe, humans' adaptability to those devices and the current forms of interaction have become a major concern in the digital era.

In this study, our aim was to understand how Vitória, a Brazilian woman who was fighting breast cancer, communicated with other people through three cyber contexts; our analysis was informed by the four dimensions of adaptability to contemporary new technologies proposed by Mey (2014): time, place, persons, and objects.

Our pragmatic interest focused on Vitória's discursive practices that emerged in multiple digital spaces with the use of technological tools, and how adaptability could be observed in her linguistic discourses. First, on the Oncoguia website, she registered her life story through a narrative of illness and pain, transformed into a narrative of hope and overcoming, possibly inspiring other people; second, in her other online spaces, she disseminated information and personal stories. Her discourses shape and are shaped by each context.

In the institutional space, the Oncoguia site, the work of constructing and maintaining positive self-image is very important, possibly even more than transpires on Vitória's personal websites; possibly this is due to the institutional rules which shape her discourse.

Through her multimodal discourse, Vitória's performance brings a dynamic aspect to her Fan Page/YouTube channel spaces as well as to her discourse practices.

The same dynamism cannot be observed on the Oncoguia website, which is more institutional in nature and besides, limited to verbal language.

As we could observe, on the Oncoguia website Vitória's identity is constructed as that of a strong woman who has faced challenges ever since receiving her cancer diagnosis, and who shows a positive attitude towards the outcome of her treatment. However, in the Facebook/YouTube spaces, where she has a wider audience, Vitória's identity is rather constructed as that of a politically engaged woman.

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CHAPTER 11

Expressing opinions and emotions while travelling on-line

A corpus-pragmatic approach

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New technologies are developed to facilitate our daily lives, and as a result, they also transform our reality and create new communication contexts between humans and machines. Mey (2006) insists on the two-way directivity of adaptation: humans need to adapt to the machine as well as machines need to adapt to humans. Our research investigates the relationship between technology, language, context and emotions, with special attention to the use of verbs and adjectives in personal descriptions of travel experiences. Specifically, two corpora of travel and tourism analyse how users share their experiences, and recommend or criticize certain itineraries and places, depending on their own likes and dislikes.

Keywords: adaptation, emotion, corpus linguistics, technology, Computer Mediated Communication

1. Introduction

The advent of new technologies has transformed our reality and has created new communicative contexts between humans and machines (Mey 2006). As a result, the construction of discourse, the conceptualization of discourse genres, and language itself are influenced by new parameters and means of communication mediated by machines. In this context, interaction in discussion boards has become increasingly popular since the 1990s; it is agreed that such boards are especially appealing for the creation of virtual communities because of their asynchronicity, anonymity, and thematic distribution. For instance, Virtanen (2013) investigates the case of discussion boards dealing with the authentication work requested from interlocutors by means of a recontextualization process, i.e., the way the addressee confirms that a message has been transmitted and understood.

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In this context, of particular importance is the way in which we communicate feelings and emotions in contact-free environments. For example, Romero-Trillo and Espigares (2012) discuss the emotions stimulated by the contemplation of nature, and align with Wierzbicka's (1993) proposal that emotions are universal. Consistent with this approach, our research will investigate the relationship between technology, language, context, and emotions in a Computer Mediated Communication (henceforth CMC) environment. For this purpose, we have collected a corpus of personal travel blogs and one of tourism discussion boards in which users share their experiences, and describe itineraries and places, depending on their personal likes and dislikes.

We will specifically analyze the appearance of positive adjectives, following the model proposed by Gladkova and Romero-Trillo (2014), who demonstrated the shared cognitive semantic value of the concept of beauty in several languages, in a study based upon Natural Semantic Metalanguage theory (Goddard & Wierzbicka 2014). Our paper will also investigate the role of two corpora in the realization of personal vs. social reference: one of positive and negative emotions in language, the other of the use of cognitive elements.

2. Computer Mediated Communication and discussion fora

Technology multiplies the ways in which we can communicate, and has changed our access to information (Rifkin 2000; Castells 2003). CMC formats that have developed on the net have their own particularities, which make them both similar to, and different from, off-line written texts (Herring 1996; Crystal 2001; Yus 2012). The literature characterizes this type of language as "hybrid", because it shares oral and written discourse features (Murray 1995; Kling 1996; Kolko & Reid 1998; Herring et al. 2004; Herring 2007, 2010; Ho & Swan 2007).

We identify three different defining aspects functioning in synergy for CMC classification: first, whether a rapport with face-to-face (F2F) communication can be established; second, written discourse particularities; and third, features directly derived from the environment, the social situation, and the respective medium.

Regarding the rapport between CMC and F2F settings, blogs share some characteristics with personal diaries, whereas fora have been compared to conversation groups. Similarities and differences between them have been thoroughly analysed in literature, as detailed in the introduction section.

As regards the second aspect, written discourse, Herring (2007) proposes some features that can be used to distribute the different text types: synchronicity, message transmission, persistence of transcript, size of the message buffer, channels of communication, and message format. Synchronicity refers to whether communication is carried out at the same time or at different moments in real time. Message transmission specifies how communication is produced, and whether a message can be seen at the same time it is being written, or after it has been sent. Persistence of transcript is related to the period of time a message can be accessed, replied to, or interacted with by other users. Then, the size of the message buffer tells us the number of characters allowed in a message; here, some networking services limit the number of characters per message. The communication channels are the characteristics of the means of communication, including whether videoconferencing is available, or just text and/or images. Anonymous messaging, private messaging, filtering, and quoting refer to the technological affordances of the CMC system which controls the ones allowed and/or and encouraged by the system. Finally, the message format determines the order of the messages, the information automatically appended to each message, how messages are visually presented, and so on.

Thirdly, as for the social situation with respect to this classification, Baym (1995) and Herring (2007) have focused on the type of interaction (one-to-one or group, public or private), the purpose of the message, the tone (formal, informal), the activity it was included in (debate, information exchange), whether it was carried out depending on certain norms, etc. Also worth considering in this connection is the topic or theme treated in a given exchange. In our case, the subject matter of the interactions, i.e. travel experiences, will be a determining factor in the analysis.

In any medium-related approach, the objective is to analyze the way in which the medium affects the message itself. For instance, Wilson (2003) analyses persuasion strategies and compares them as they occur in face-to-face communication versus in CMC. He concludes that the two most commonly used strategies in both genres are: rewarding compliance (by means of promises) vs. punishing noncompliance (via threats), and use of rational arguments (reason) vs. non-rational arguments (emotion and altruism). Even so, these strategies have different prevalence in each genre: in situations characterized by a strong need to persuade, the findings suggest that it is necessary to augment the CMC in order to let users carry out the full range of persuasion strategies (Wilson 2003: 549).

In Figure 1 we have summarized the different theoretical traditions social situation- and medium-related, which affect the description of CMC.

Discussion boards and blogs are especially effective in the creation of virtual communities, due to their asynchronicity, anonymity and thematic distribution; also, they share the interactive dimensions found in the face-to-face interaction. They have been thoroughly studied from several stances: focusing on their use (Hara, Bonk, and Angeli 2000; Cooper 2001; Kay 2006); on their value for teaching purposes (Benigno & Trentin 2000; Burstall 2000); or on the analytic aspects of online discussion (Meyer 2003). From an interactional perspective, some authors have studied the role of discussion boards as social networks and creators of

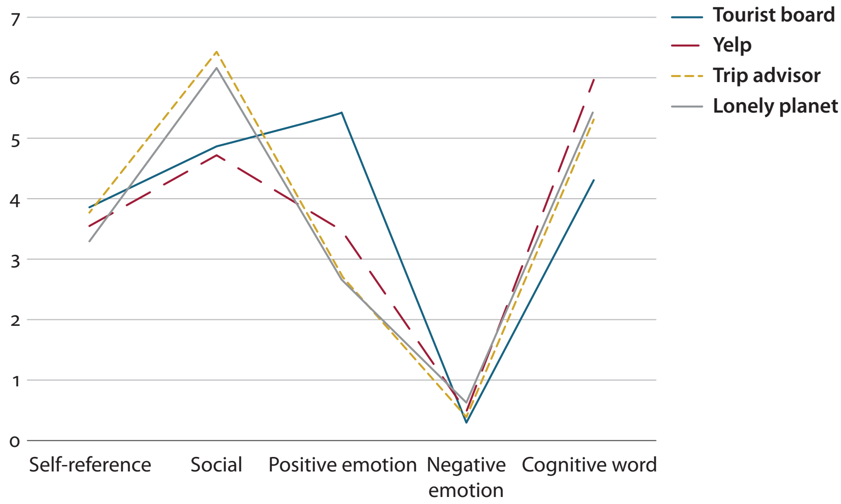


Figure 1. Factors affecting CMC

social interactions (Paccagnella 1998), or have looked into communication patterns within online communities (Zaphiris & Sarwar 2006). Particularly interesting for our research is the work by Pfeil and Zaphiris (2009) and their study of empathic communities as creators of bonds that are able to transform the kind of communication produced. The authors conclude that members of a community are more connected and closer to each other, and that the type of empathic communication is linked to the social network structure, also within a discussion board. Also more generally, discussion boards are considered as communities with specific common interests. Part of their interest lies in "their dynamic nature as self-organizing communities in which individual and group identities as well as communicative norms are displayed and negotiated" (Kleinke & Bös 2015).

As regards *blogs* and their classification, we can identify three types:

1. Personal diaries, which narrate the thoughts or activities of their authors (Blood 2002; Herring et al. 2004).
2. Filter diaries (Blood 2000), which collect news or interesting facts from other websites by means of links, and propose a line of thought or discussion.
3. Content blogs, which publish scientific, technical and academic content on the internet.

From a technical perspective, blogs differ from websites (which are much more static), and from chats (where communication is produced immediately and then disappears. According to Herring et al. (2004), private individuals create and participate in blogs as a vehicle for self-expression. Thus, blogs are also fundamentally different from webpages; they possess a socially-transformative, democratizing potential, by allowing authors to choose their topics, and be their own managers. Blogs also place all the participants in a blog at the same level.

The characteristics of a blog are equality, continuity and possibility of revision – all features which increase their interest for users. As regards discussion boards, they share some characteristics with blogs as regards their preferred form of communication. As Herring et al. (2004: 10) say:

> Weblogs are situated at an intermediate point between standard Web pages and asynchronous CMC along each of these dimensions. […] weblogs are typically updated several times a week, and discussion forums are updated every time a conversational participant posts a message. Author and reader roles […] share the fully symmetrical give and take of unmoderated discussion forums; blogs allow limited exchanges (in the form of comments), while according blog author and readers asymmetrical communication rights – the author retains ultimate control over the blogs.

Interestingly, numerous studies are dedicated to content blogs and their education potential (Chu et al. 2012; Robertson 2011, Deng & Yuen 2011); they offer readers the possibility of self-learning, thanks to their interactive strategies.

Because of the blogs' interactive nature, several authors, like Efimova and de Moor (2005) or Langellier and Peterson (2004), refer to them as a "form of conversation," assuming that a weblog conversation may be considered "as a series of interrelated (interlinked) weblog posts and comments on a specific topic, usually not planned, but emerging spontaneously" (Efimova & de Moor 2005: 1).

Some of these authors consider blogs to be a digital extension of F2F conversations and explain the network as an 'assemblage' of conversations. Therefore, in spite of their significant variations, such as differences in code and message relationships between conversations and blogs, it is generally accepted that blogs are a sort of conversation (Peterson 2011). From the point of view of genre, Herring et al. (2004: 3) likewise insist on characterizing blogs as conversations or conversational exchanges, with a strong community load:

> Among its practitioners, blogging is also frequently characterized as socially interactive and communitylike in nature. Not only do blogs link to one another […], but some blogs allow readers to post comments to individual entries, giving rise to "conversational" exchanges on the blog itself.

However, such conversations on a given subject matter are restrained by: (1) a distributed and fragmented nature; (2) lack of bidirectional links, which permit answers to direct readers to previous comments, and (3) lack of follow-up technologies which would enable users to find a linked argumentation or series of arguments

(Efimova and de Moor 2005). As it is, the conversational nature of blogs shows their specific character of vehicles for communication.

Distributioned participation is another particularity of blogs, according to Bolander (2012: 1611), who claims that the distribution of conversational roles, rights and duties, and of language behaviors (like agreement or disagreement) reproduces certain conversational structures:

> […] both bloggers and readers can read and write comments, and readers can read posts written by bloggers. […] Bloggers are obliged to write posts if they want to maintain their blogs and continue to attract readers. Readers, however, have no obligations at all. They can, but do not have to, participate passively (read posts, read comments) or actively (read posts, write comments).

3. The features of online travel communities

The specificity of online travel communities is that they help users meet their desires and needs regarding travel-related knowledge by sharing 'hedonic' values (Wang & Fesenmaier 2004). In fact, interpersonal communication and shared experiences have long been recognized as influential in the tourism industry. Nowadays the possibilities offered by new technologies allow this kind of information to be publicly accessed. Travel blogs grant consumers the possibility of sharing their travel-related comments, opinions, and personal experiences as valuable information for prospective travelers. This accords them a certain degree of empowerment, which leads to the democratization of information and greater influence on decision making processes.

The most remarkable features of travel discussion fora, according to Lee and Hyun (2015: 427), are the following:

1. They permit individuals to access other travelers' knowledge of and feelings about specific destinations;
2. They are utilized as collaborative decision-making platforms offering unbiased information about emotional experiences regarding a given destination or travel;
3. They involve the functions of emotional intelligence and marketing in persuading people to be actual travelers (Litvin, Goldsmith, & Pan 2008).

Pühringer and Taylor (2008: 179) have defined travel blogs as "individual entries which relate to planned, current or past travel. Travel blogs are the equivalent of personal online diaries and are made up from one or more individual entries strung together by a common theme". Through online travel stories, tourists communicate with an audience and can share their opinions and comments, and also construct their identities (Banyai & Glover 2011).

By contrast, in blogs, communication is established at the same time as it produces an impression on the interlocutor. Prior knowledge of the other partner(s) is not needed. This contrasts with traditional CMC, in which interpersonal bonds are created between interlocutors after they have successfully created an impression of the partners with whom they are interacting (Di Blasio & Milani 2008). In the cases studied here, the users look for, and take advice, from strangers participating in a forum they trust.

The next step is to examine the features of travel blogs from the point of view of the language used, in terms of cognitive, social, and contextual factors (Sykes 2005). For this purpose, some authors have focused on the specific users and their discourse: the way they present themselves, the kind of topics they introduce, or their approach to the blogging. One of such studies (by Lee & Hyun 2015) studied the connection between using online travel communities and representing one's social and emotional loneliness, one's identification with the peer group, and one's intention to follow the travel advice.

In general, this type of travel is usually related to tourism and holidaying. For this reason, the kind of information shared, both in discussion boards and in travel blogs, as well as the participants' comments are mainly expressed in positive and personal terms, even though some negative experiences may also appear. In fact, according to Litvin et al. (2008), participants in travel discussion boards tend to have either very favorable or very unfavorable evaluations toward a particular service or location, with the mid-range majority being far less inclined to post their opinions.

In addition, this type of blogs tends to be descriptive of the places visited or of the things to do, or what to bring when one travels. In the present study, we will look into the question of universal and culture-specific elements in aesthetic perception (Gladkova & Romero-Trillo 2014). In a similar trend, Romero-Trillo and Fuentes (2014) analyzed whether the use of *beautiful* is universal or cultural, and provide information about the way humans process beauty at a cognitive level, and how it is recognized, then graded, and finally consolidated.

Thus, the object of the present study is to analyze the way in which people who participate in blogs and discussion boards related to travel and tourism interact and express their experiences and emotions, both in travel blogs (signed by one person) and in discussion boards (with input from several participants). The analysis will consider the type of discourse the participants use to convince the others, respectively create their own narratives while revisiting their trips. Two corpora have been collected in order to analyze the use of positive adjectives and their distribution; these are the ones with the greatest frequency of use, being preferred by travelers when describing their trips. We will also investigate the expression of positive and negative emotion in terms of social and self-reference, of emotion.

The remainder of this paper is structured as follows. Section 4 describes the methodology used in the analysis. Section 5 explains the results and establishes a comparison. Finally, the results are discussed in Section 6.

4. Data and methods

Two corpora, gathered between September 2014 and January 2015 have been used for the present study. The first, Corpus A, is a corpus of 30 entries selected from four mainstream discussion boards dedicated to giving advice about travelling to specific parts of the world. The discussion boards selected were the following:

- Yelp (http://www.yelp.com)
- Touristsboard (http://www.touristsboard.com)
- Tripadvisor (www.tripadvisor.co.uk)
- Lonelyplanet (https://www.lonelyplanet.com)

The selections included several entries by would-be travelers asking for advice about what (not) to see, to do, or where to stay. Some of the topics are: Paris (Thread: Vacationing in Paris), Western China, New York, Turkey, Marrakech (Marrakech in February), Croatia (Itinerary review), or Cape Cod (Topic: I want to go to Cape Cod). The corpus has 36,422 words.

The second corpus, Corpus B, also consists of 30 entries from 10 personal travel blogs, totaling 71,931 words. In this case, the topics depend entirely on the bloggers. Some of them were travel trips, other descriptions of the places visited, or of food tasted in different places.

This corpus gathers posts from the following blogs:

- gobackpacking (gobackpacking.com)
- journey wonders (http://journeywonders.com)
- just one way ticket (www.justonewayticket.com)
- migrationology (migrationology.com)
- the poor traveler (www.thepoortraveler.net)
- the savvy backpacker (thesavvybackpacker.com)
- expert vagabond (expertvagabond.com)
- wandering trader (wanderingtrader.com)
- ytravel (www.ytravelblog.com)
- travels of Adam (http://travelsofadam.com)

4.1 Some examples with different adjectives

The corpora were first analysed in search of adjectives, in order to have a general view of the type of descriptions and emotions that were included. The first step was to study positive emotions by looking at the most frequently used positive adjectives in the discussion boards. Four adjectives were selected for the analysis: *beautiful, good, great*, and *nice*.

Below, there is an example of the type of comments and the structure presented in a travel blog, in particular *Touristsboard* about a vacation in Paris. The adjectives used in this conversation have been highlighted, so that, at first sight it can be seen that some participants use almost no adjectives in their answers, and merely explain their own experiences, and that when they do use them, speakers tend to repeat the adjectives used in the question:

http://www.touristsboard.com
Thread: Vacationing In Paris

Flavia	I have always heard the Paris is the most **Romantic** City in the world. I really intend on going there, and I want it to be **super special**. What are some of the suggestions that you have about the places to visit and the activities to do?
Gregor	It depends what you like. I like going in November when the Nouveau Beaujolais hits the bars. I walk at night with my wife up the Champs de Mars towards the Eiffel Tower and have a whiskey in a bar on Place Contrescarpe. All those things hold memories for me. On a **cold** afternoon I like to have hot chocolate on Berthillon's behind Notre Dame
crimson ghost747	Watch out! Paris is definitely a **nice** city (why else would I live here?) however don't expect it to be the most **amazing** place in the world. Yes it's **romantic** and very ***beautiful*** but it's not "**super special**". You still have **shady** neighborhoods, beggars etc… just like any other big city. I'm definitely not saying that you shouldn't go. Come over and see the ***beautiful*** city but don't expect it to be **perfect**

We can observe that there is a *Thread*, which describes the subject matter of a given question, followed by the specific requests of the person who is going to travel and seeks for advice. This is followed by the comments of the participants on the board.

The example below illustrates the structure of personal blogs. Here, the entries are some sort of personal narrations related to travelling experiences. It also shows that in this case the author uses almost exclusively *beautiful* to refer to the place described:

justoneway BORACAY ON A BUDGET: A WORLD-CLASS ISLAND IN THE PHILIPPINES ON $23 A DAY By Sab
Can you visit one of the most *beautiful* islands in the world on a low budget? Yes, you can! I'll show you how to enjoy Boracay on less than 1000 PHP ($23 / ?17) a day. Welcome to paradise. Situated in the heart of the Philippines, Boracay in the Philippines is the Côte d'Azur of Asia. A place where actors and models escape to and lounge in the sun. The island is only 10 km² (4,000 sq mi), and is located 300 km (190 mi) south of Manila, the capital of the Philippines. Boracay is the kind of island you will never want to leave. I've traveled to more than 50 countries and there are not many places where I've returned 5 times. Boracay is one of them. The instant I set foot there back in 2009, I knew was in love. The place was incredibly *beautiful* and laid back. I had found my own paradise; one with the most perfect white-sand beaches, coconut trees, and turquoise-blue water. Without a doubt, Boracay is one of the top beach destinations in the world. Recently the magazine Leisure and Travel ranked Boracay as #2 on the list of the world's best islands of 2013. Last year, Boracay was even the number 1. I always wondered why people told me that Boracay is oh-so-expensive. I understand, people probably assume it's pricey to stay in one of the most *beautiful* places on earth. Here is the good news! It's not if you read this post and follow my tips! I spent almost a year in total in Boracay, trust me, I know this island better than my own kitchen. In this article I will calculate everything in Pesos (PHP), the currency of the Philippines. I want to show how you can have an awesome time in Boracay with a daily budget of only 1000 PHP.

The second step was to analyse social and self-reference in the texts, as well as the positive and negative emotions; for the latter, we used the Linguistic Inquiry and Emotions analysis (henceforth LIWC) (Tausczik and Pennebaker 2010).[1] This tool describes the emotional and cognitive lexical load of texts, based on the psychological analysis of words against a reference database. The psycholinguistic categories are the following: self-reference, social meaning, positive emotion, negative emotion and cognitive meaning. The program is based on psycholinguistic studies proving that individuals who benefit most from writing tend to use high percentages of positive emotion words, a moderate number of negative emotion words, and an increasing number of cognitive or 'thought' words (Pennebaker and Francis 1996; Scholand, Tausczik and Pennebaker 2010). The LIWC analyses assess, *inter alia*, 22 standard linguistic dimensions (percentage of pronouns or articles in a

1. Software details in http://www.liwc.net.

text), 32 word categories for psychological constructs (affect, cognition, biological processes), an seven personal concern categories (work, home, leisure activities). Table 1 shows examples of the variables used by LIWC to identify the categories chosen for the present study: social reference, affective (positive and negative emotions), and cognitive processes.

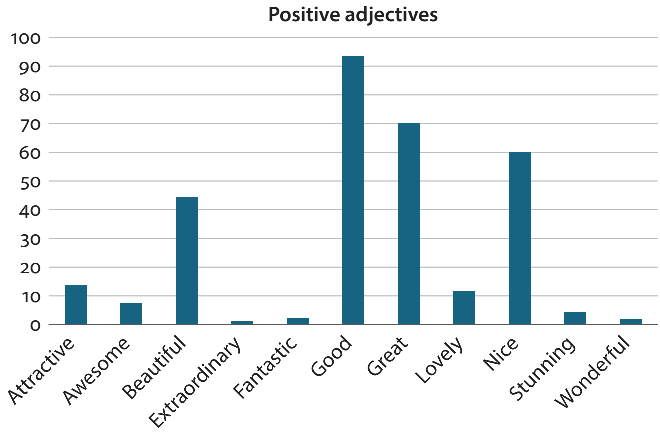
Table 1. LIWC categories for social, affective and cognitive processes

Category	Examples
Social processes	Mate, talk, they, child
Family	Daughter, husband, aunt
Friends	Buddy, friend, neighbor
Humans	Adult, baby, boy
Affective processes	**Happy, cried, abandon**
Positive emotion	Love, nice, sweet
Negative emotion	Hurt, ugly, nasty
Anxiety	Worried, fearful, nervous
Anger	Hate, kill, annoyed
Sadness	Crying, grief, sad
Cognitive processes	cause, know, ought
Insight	think, know, consider
Causation	because, effect, hence
Discrepancy	should, would, could
Tentative	maybe, perhaps, guess
Certainty	always, never
Inhibition	block, constrain, stop
Inclusive	And, with, include
Exclusive	But, without, exclude

5. Results

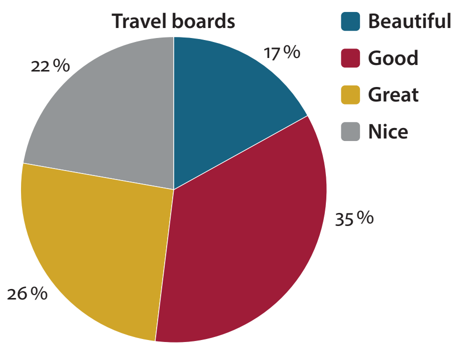
5.1 Analysis of positive adjectives in the corpora

First, we will look at the results obtained in the analysis with regards the expression of positive experiences and emotions, in particular the use of adjectives in the two different settings analysed. If we look at the results for the discussion boards (Corpus A) in Graph 1, we can observe that the most used adjectives are ‘good’ (29%), ‘great’ (22%), ‘nice’ (19%) and ‘beautiful’ (14%).



Graph 1. Most frequent positive adjectives used in discussion boards

Graph 2 shows the results for these adjectives in Corpus A taken as a whole; we can see the preference for the use of the adjective 'good'.



Graph 2. Distribution of adjectives in discussion boards

As regards the specific presence of the adjectives in each travel board, we can observe in Graphs 3–6 that although the adjective *beautiful* is the least frequent in general terms, it appears in the touristboard.com discussion board overwhelmingly, while *good*, the most frequent adjective, shows a preference for the blog yelp.com.
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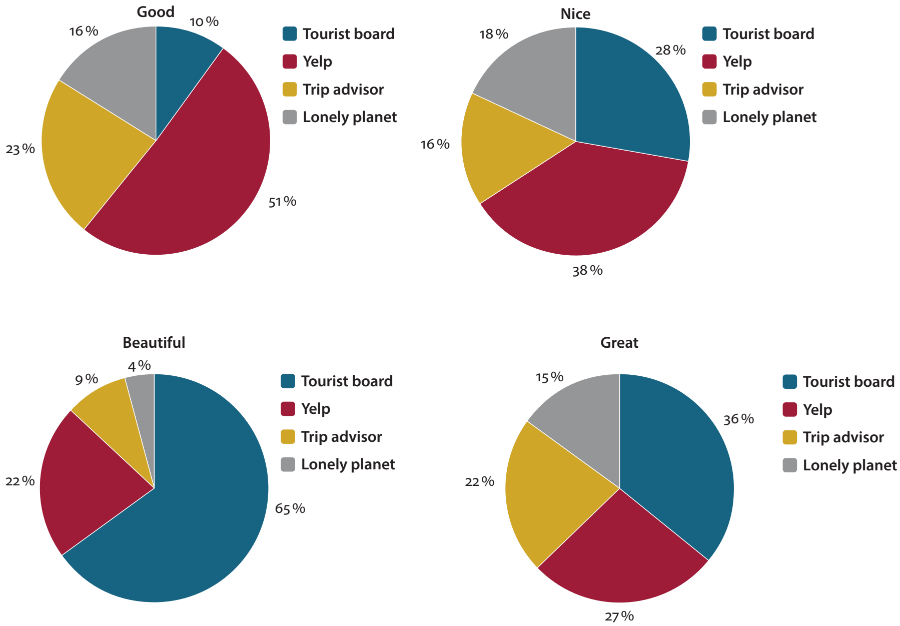


Graph 3–6. Distribution of adjectives per discussion board

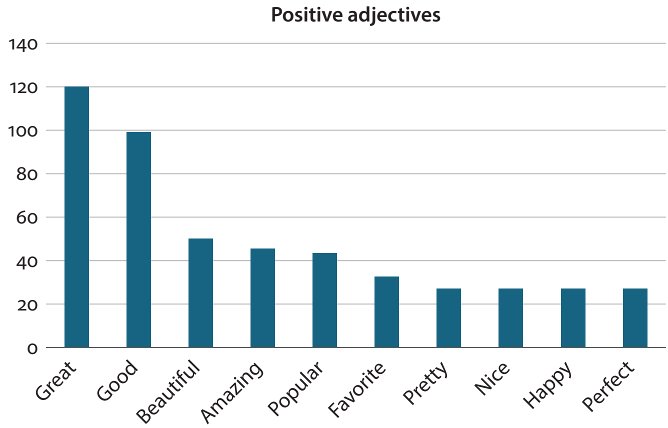
In fact, the statistical analysis (Fisher's test) shows that there is a significant difference in the specific presence of two of the four adjectives, 'beautiful', in touristboard.com, and 'good' in yelp.com.

– beautiful: $p = 0.0053$
– good: $p = 0.0487$

By contrast, the adjectives 'great' and 'nice' do not show a significant statistical presence in any board.

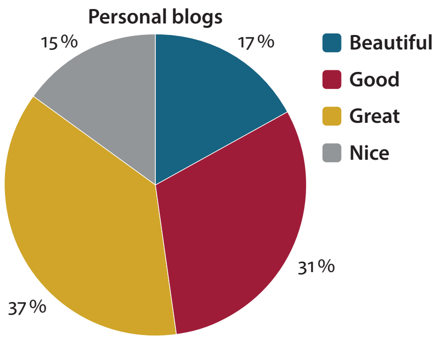
In order to see the specific features of Corpus A, we analyzed the type-token ratio of the 30 travel blogs and computed the correlations between them and the frequency of the four adjectives in each blog. The results showed that the use of 'beautiful' correlates negatively with the blogs with a higher type-token ratio, in other words, 'beautiful 'tends to be more frequent in the texts with less lexical richness (Pearson Correlation test = $p < 0.05$).

As regards Corpus B, we considered the results of the personal blogs as a whole. Graph 7 shows the results for the positive adjectives found in these blogs.



Graph 7. Most frequent positive adjectives found in personal blogs

As can be observed, the results are slightly different from Corpus A. Although there is also a preference for the adjectives 'great' and 'good', the order in which they appear is reversed, and the most commonly used adjective is 'great' (37% of the cases), followed by 'good' (31%), and then 'beautiful' (17%). The adjective 'nice' in this corpus obtains the same amount of appearances as do 'pretty' or 'happy' (15%). With regard to the number of tokens in the texts, Graph 8 represents the four adjectives analyzed in the entire Corpus B.



Graph 8. Distribution of adjectives in personal blogs

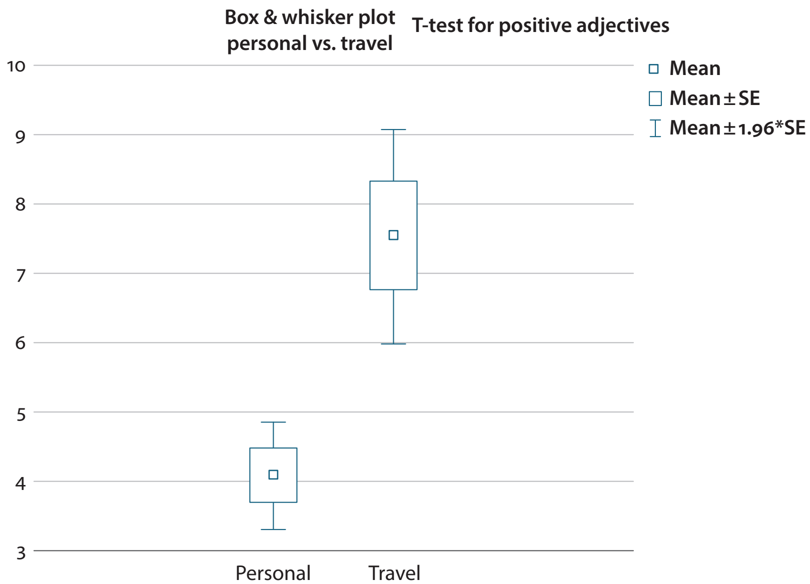
In the case of the type-token ratio and adjective use in personal blogs, the adjectives 'nice' and 'good' also showed a negative correlation (Pearson Correlation test = $p < 0.05$), i.e. they were more used in the blogs with a lower type/token ratio, as in the case of 'beautiful' in travel blogs.

As regards the type-token ratio comparison between the two corpora, the correlation test did not render any significant differences, as the type-token ratio mean was similar in both cases: 36.25 in the personal blogs, and 38.78 in the discussion boards.

However, we found a big difference in their overall frequency of positive adjectives in the two blogs:

- Personal blogs 12.23%
- Discussion boards 22.65%

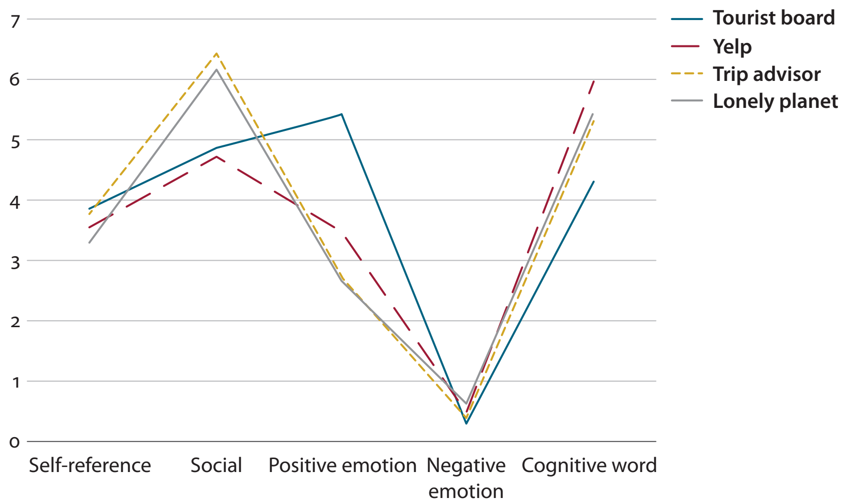
The t-test comparing the presence of positive adjectives in the two types of blogs showed a significant statistical difference: t = −3.90; d.f. 58; $p = 0.0002$. This proves that personal blogs have a lower presence of positive evaluation and bloggers are more inclined to express their activities rather than assess their impressions. Graph 9 shows the diverse realization of the adjectives in both blog types.



Graph 9. Comparison of the presence of positive adjectives in personal blogs and discussion boards

5.2 Analysis of the expression of reference and emotions in the corpora

We will now show the results for the expression of reference and emotions in discussion boards and personal blogs, based upon the analysis done with LIWC software. Graph 10 below shows the results for Corpus A. As can be seen, the results have been grouped according to the board where they were published, although they are not necessarily due to the same persons; it is common that participants in the boards contribute in them more than once, thus creating an online community. The analysis includes the description of the five categories under analysis: cognitive words, negative emotions, positive emotions, social words, and self-reference words.

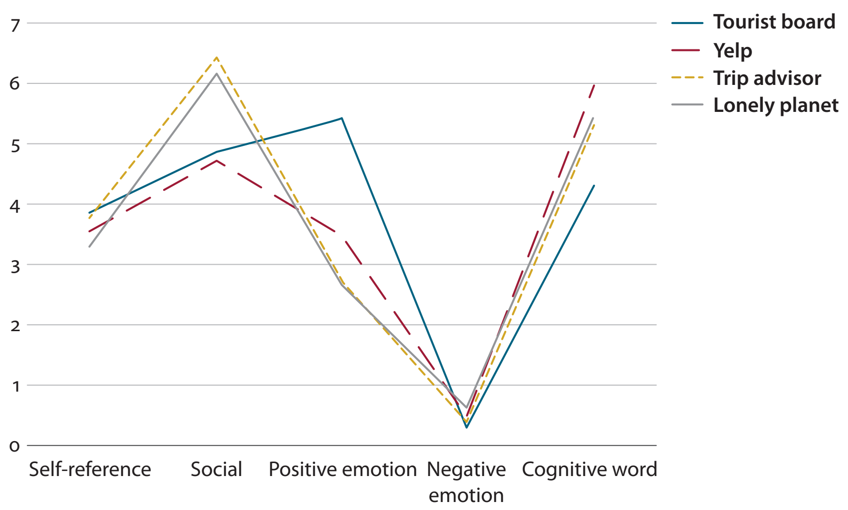


Graph 10. Expression of emotions in discussion boards

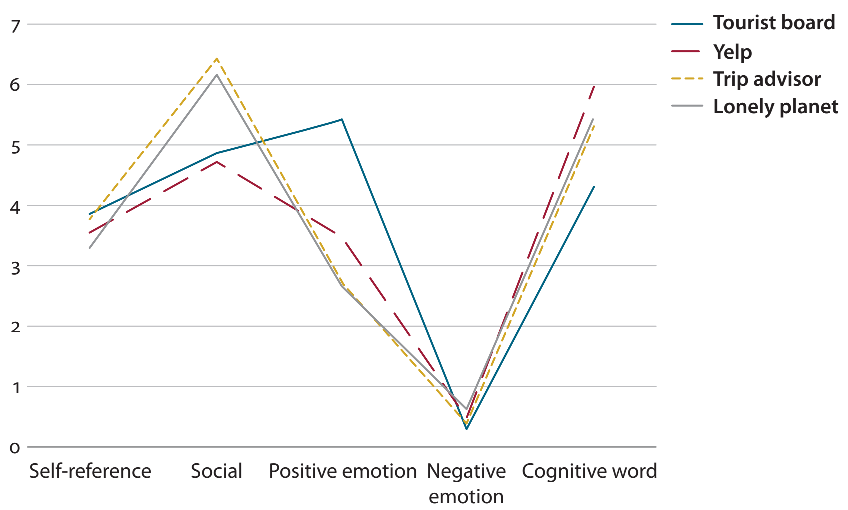
As can be observed, the five categories show a similar pattern in the four boards, being negative emotions at the lower level, with a significant component of the social and cognitive elements. These results are consonant with the literature mentioned above and the idea that blogs tend to discard negative comments and have primarily a social function.

The emotions analysis carried out on Corpus B show similar results to Corpus A, with the social function at the top and the negative emotions at the bottom, as shown in Graph 11. In both cases, the cognitive component is also important as bloggers transmit their knowledge about certain places.

The overall comparison in the analysis of emotions in discussion boards and personal blogs can be observed in Graph 12. The results show that discussion boards have a lower value than have travel blogs, with special reference to the social and positive emotion values.

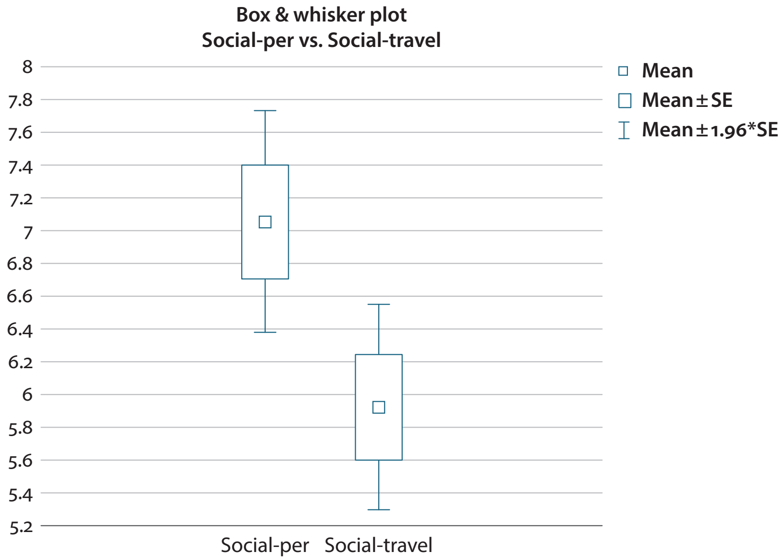


Graph 11. Expression of emotions in personal blogs



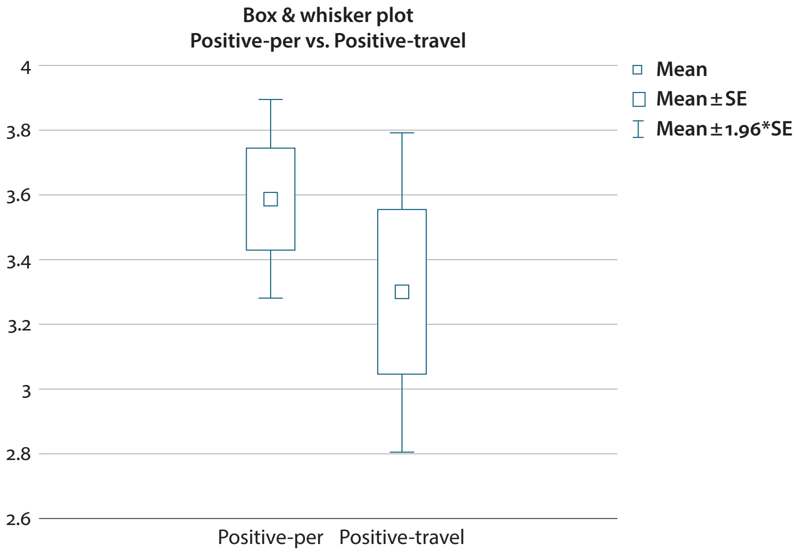
Graph 12. Comparison of emotion expressions in travel and personal blogs

In fact, the t-test results show significant differences in the comparison between discussion boards and personal blogs in the social domain (t = 2.42; d.f. 58; $p = 0.01$), as Graph 12 shows.



Graph 13. Comparison of social elements in personal blogs and travel discussion boards

Also, the t-test comparing the realization of positive and negative emotions showed significant differences in the realization of positive emotions in the two types of blogs: t = −6.61; df.58; p = 0.0000, as Graph 13 shows.



Graph 14. Comparison of positive elements in personal blogs and travel discussion boards

6. Conclusions

Several conclusions can be derived from the analysis of the two corpora. First, regarding the use of positive adjectives, we have observed the significant use of 'beautiful', 'good', 'great' and 'nice' in Corpus A and Corpus B. Additionally, a similar distribution of these four adjectives can be seen in both discussion boards and travel blogs, indicating no significant differences between individual and collective uses of the adjectives. The most popular adjectives are 'great' and 'good', to refer to travel experiences and emotions, although travel boards make greater use of 'nice', and personal blogs use 'beautiful' to a greater extent. However, the type-token ratio analysis of the corpora showed that the use of 'beautiful' in discussion boards correlates with a lower type-token ratio; in other words, 'beautiful 'tends to be more frequent when there is a less diversified lexical richness in the blogs (Pearson Correlation test = $p < 0.05$). The same occurs with the type-token ratio analysis in personal blogs with 'nice' and 'good', which show a negative correlation (Pearson Correlation test = $p < 0.05$). These results suggest that the use of the most frequent adjectives represents the immediate lexical recourse to describe personal experiences.

As regards the global frequency of positive adjectives in both corpora, we found that personal blogs use 12.23%, while discussion boards use 22.65%. The statistical test showed a significant difference between the two: t = –3.90; df 58; $p = 0.0002$. This indicates that personal blogs have a lower relative presence of positive evaluation adjectives and that, in this case, bloggers are more inclined to enumerate their activities rather than comment on their impressions.

As regards the analysis of the emotional and cognitive lexical load of texts based on the psychological analysis of the words, the analyses have shown that both corpora have a very similar component of cognitive elements used for the description of the places. Moreover, these descriptions often include personal opinions and persuasive strategies aimed at influencing the interlocutors' decisions or views on the possible destinations chosen; for instance, in the example provided from http://www.touristsboard.com, great stress is laid on the importance of changing the expectations of what should be found in Paris, or what view of Paris should the traveler have prior to departure.

If we now focus on the results obtained for the display of positive and negative emotions, both corpora show similar results, with somewhat higher results for positive emotions. This correlates with the idea that travelling is related to happy experiences and that discussion boards are used to express positive experiences. Parallel to this, it seems clear that there is a common language for about tourism and travel experiences, even though it is used inside a community or in isolated diaries; even so, the personal blogs show higher values when it comes to express positive emotions. In this sense, the adaptation is twofold; adapting one's expectations when travelling, but also adapting one's own experiences to narrations of success, of happy travelling.

Another interesting result is the one obtained for social and self-reference. It could be anticipated that there would be greater references to the self than to the social in both cases, since these are spaces where one gives advice and recalls personal experiences. However, both corpora show that in all the cases (all discussion boards, and all blogs) self-reference scores lower than does the social domain. This is especially significant in the comparison between travel and personal blogs, where the later show a higher use of social elements. To some extent, this also supports the idea of empowering the self through its active presence in the community making process.

Finally, we believe that our study has shed some light on the language of two types of CMC fora related to travelling, the personal blogs and the discussion boards. Our methodology, based on corpus linguistics with the analysis of the most frequent positive terms, in liaison with the analysis of the corpora based on the psychological component of words, shows the great potential of the linguistic analysis of Computer Mediated Communication.

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CHAPTER 12

How LINE users struggle to come to terms with the adaptability-adaptivity dilemma

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This article addresses the tension between the two contrasting forces of *adaptation*, introduced in Mey (1998, 2009). Many aspects of Thai people's day-to-day interactions through/with LINE, a popular internet-based chat application, challenge the premises that humans should have control over technology (*adaptability*) rather than letting technology force limits on human's affordances (*adaptivity*). My discussion will exhibit how Thai speakers operate LINE to achieve different purposes, both to the benefit and the detriment of themselves and one another, and despite unfavourable consequences from using or interacting with LINE, either known or unknown to them. These practices illustrate changes to various aspects of the Thai mindset and how relationships, identities and interactions among Thais in the modern world are constructed, negotiated and contested.

Keywords: adaptability/adaptivity dilemma, Thai users, computer applications, instant messaging, 'leaks', LINE, toolness, HCI, social responsibility

1. Introduction

An issue that looms large in human-computer interaction (HCI) research often revolves around accommodating the human user, as opposed to prioritising optimal technical specificity and sales appeal (Nickerson & Landauer 1997: 14). Mackenzie (2013: 27) speculates that "the deepest challenges [in HCI] lie in the human factor" and that "[t]he more we understand humans, the better are our chances of designing interactive systems – interactions – that work as intended." Following Mey's (1998, 2009) dichotomy (see also Gorayska & Mey 2004), a rule of thumb for the development of the computer and technological devices is this: We need adaptable innovations, ones that live up to the free will, comfort and all the good things that human users enjoy – and not the other way around; which implies that humans should never subject themselves adaptively to the control or limitations inherent

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in those innovations. 'Inhumane' as this line of argument might sound (computers and technologies being, after all, artefacts made by and for humans), adaptability, not adaptivity is the ideal we should be aiming for (Mey 1998, 2009).

A major thrust of the present chapter is directed towards the tensions associated with adaptability and adaptivity, with reference to the Thais' lived experience with LINE (styled 'LINE' in the official logos) (see Figure 1), an internet-based chat application for smartphones and varying types of personal computers.

Figure 1. Recent LINE's official logos

(Source: http://line.me/en/logo)

LINE has a rather humble beginning. It was launched by Next Human Network (NHN), Japan, initially as a makeshift communication channel for its employees after the Tōhoku earthquake and tsunami brought devastation to a large portion of Japan's telephone network in early 2011 (Saito 2012). Not too long after its release to the general public, by July 2012, the number of registered LINE users worldwide reached approximately 50 million, racking up a total of 560 million in October 2014 (Statista 2016a). Many sources claim that other social-networking competitors took more time to achieve a worldwide reception of the scale LINE has attained (Akimoto 2012; Bushey 2014). Word of mouth along with LINE's aggressive advertising campaign (Akimoto 2012) generated different sources of income for LINE Corporation; thus with reported revenues for the 3rd quarter of 2015 at JPY 32.2 billion (LINE Corporation 2015) and for the 2nd quarter of 2019 at JPY 55.4 billion (Business of Apps 2019), LINE has realised gains that few rivals can outperform.

A quick glance, as we home in on Thailand, reveals that already as of 2014, of the 67 million Thai population (Central Intelligence Agency 2015), 33 million were *on-LINE* (Statista 2016b). An estimate for the last quarter of 2015 shows the number of active users of LINE in Thailand as 33 million, LINE being the instant-messaging service with the highest rate of daily access (66%) among the kingdom's residents, ahead of Facebook (46%) and WhatsApp (10%) (Yozzo 2015). And even more recently, according to Callerame (2019), as of early 2019, "LINE was the [most] popular mobile app of any kind in Thailand, in terms of active users as well as overall revenue". These few selected facts and figures provide compelling evidence of the popularity and reliability that LINE enjoys among at least half (if not more) of the Thai population. But we need more than statistics in order to better rationalise

LINE's success story and, for our current purposes, how this relates to what I will call the *adaptability-adaptivity dilemma* in a Thai context. On the one hand, many Thai users' perception of LINE's usability and functionality is that it facilitates and enhances social networking; on the other, there have been many criticisms, holding LINE accountable for disrupting the traditional model of security, interpersonal relations, and human values.

No matter how much we like to entertain the thought that maximising human affordances lies at the heart of all technological development, and that human adaptability should be given high priority, the overall issue of adaptability vs. adaptivity is more complicated than it looks at first sight. In this connection, particular attention is paid to users professing (psycho-behavioural) immunity from negative assessments about themselves and/or claiming impunity with regard to their own negative pronouncements about other LINE users; in other cases, users have simply internalised the fact that LINE has become a part of their daily routines, being contented with the way it allows them to transform or underline their respective identities. All this makes it debatable whether either adaptability or adaptivity would be the definitive proposal to adopt.

To obtain a clearer picture of how Thai users of LINE struggle to come to terms with the adaptability-adaptivity dilemma, I shall discuss the different kinds of affordances that are made possible through the use of LINE; the societal implications of its usage; and the perspectives common to LINE's stakeholders.

2. Getting acquainted with LINE

2.1 LINE and instant messaging

Technically, LINE falls into the realm of instant messaging (IM), an innovation that is gradually replacing the short-message service (SMS), which has weaved itself into the daily life of millions of people across the globe since the mid-1990s (see Church & de Oliveira 2013: 352). SMS provides its users with an alternative means of exchanging messages that combines features of (traditional) written and spoken forms of communication. SMS is a built-in feature of conventional mobile phones, and as such, was designed to handle text-only messages. IM, by contrast, is SMS's more practical successor. Being internet-based and usable with any smartphone or compatible computer, IM allows lengthier and more messages to be sent together with embedded audio and/or visual files at no other cost than the internet data charge. Another very appealing affordance offered by IM that immediately comes to mind is the possibility of making free voice and/or video calls. It is in light of this that we see LINE's many commonalities with other instant message services like WhatsApp, WeChat and KakaoTalk, as reported in a Korean case study by Park et al. (2014), who pointed out that these mobile IMs' user satisfaction is triggered by three factors: self-disclosure, 'flow' (that is, the state of being completely absorbed in the cyber environment), and social presence. Also, looking at LINE usage in a Japanese context, Takahashi (2014: 200) provides a similar, well-documented observation that being free of charge, being capable to operate as a closed space, and the availability of 'stickers' (a more developed version of emoticons), are among the main attractions that explain LINE's current popularity among young Japanese.

2.2 Key features and functionality

LINE is a trendy platform that helps one stay connected; actually, many current users would say that it is difficult not to be on LINE when (almost) everyone else is. In fact, when LINE's developers released it for free public download, they had not anticipated the extent of its later popularity. Initially conceived as platform for a mere maximum of one million users, in October 2011, LINE experienced a massive server overload and delay in message delivery (perhaps a first sign of LINE's adaptivity?), following which the developers had to resort to more robust storage systems (Sagynov 2012). New features have been added to LINE at regular intervals to ensure increased user functionality. For instance, within the first year, the function of making free voice calls was introduced; next came features such as Home (a space showing a record of a user's profile) and Timeline (a newsfeed of the user's and his/her selected contacts' activities, such as their comments and photo updates; Toto 2012). The application can be configured to suit the user's personal preferences in order to protect a certain degree of privacy (e.g. via the 'hidden chat' feature). Two typical LINE conversations (i.e. one-to-one chat and group chat) can be found in Figure 2.

LINE's popularity amongst users across societies owes a great deal to another feature: the availability of enhanced emoticons, commonly known as *stickers* (Wang 2015). With just a few taps on the screen, stickers enable users to express very specific thoughts and feelings via LINE's mascots/cartoon characters or other imaginative graphics, sometimes coming with set texts and animations. Some stickers can be far more informative (when delivered and interpreted in the right context, of course) than messages composed by keying in letters and words, as the stickers in Figure 3 show.[1]

1. The embedded text in sticker 3 (in the middle) is in Japanese, which reads *shimatta* ('Oops!'/'Oh, no!'). Stickers 4 and 5 are in Thai, with the adjacent captions saying *hɤ̀ɤ seŋ* ('Huh, [I'm] fed up.') and *ʔaw tʰîi sa-baaj tɕaj làʔ kan* ('Do it the way you like').

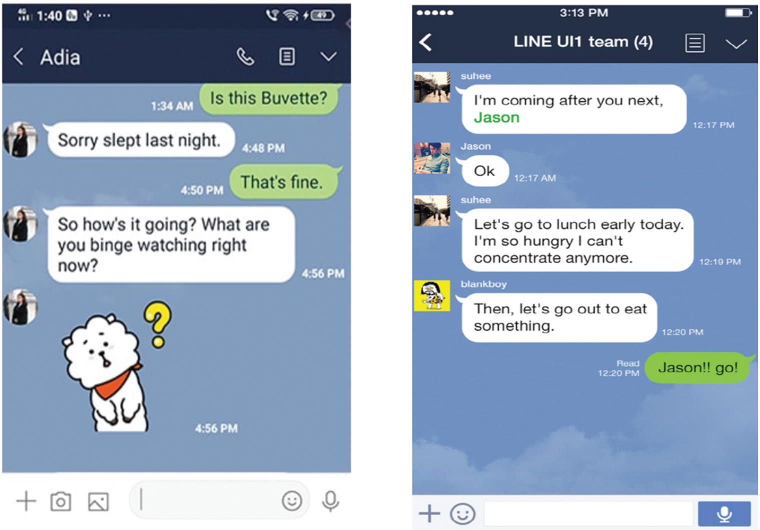

Figure 2. Typical LINE chats
(Sources: https://www.iphone-to-pc.com/ and http://official-blog.line.me/, respectively)

Figure 3. A sample of free LINE stickers
(Source: http://www.line-stickers.com)

Users have a handful of additional LINE services at their disposal – either in terms of daily news coverage (e.g. LINE Today), entertainment (e.g. LINE Camera, LINE Game, LINE Music and LINE TV), purchase of goods (e.g. LINE Shop, LINE Pay and Line Man), or education (e.g. LINE Dictionary). Interestingly, philanthropy is another affordance that users can pursue through LINE. Unlike its competitors, LINE has taken part in regular fundraising efforts in a bid to ease the aftermath of natural disasters, like earthquakes and typhoons, by donating part of the revenue from its sale of purpose-designed stickers to victims in the countries affected (see Bushey 2014).

3. Adaptation and its wider social implications

Following the recent development of LINE, there have been attempts to determine what lies behind its popularity in Thai society. Kulchitjuervong (2013) identified the benefits that users obtain from embracing LINE, ranging from multiple platform accessibility, control over incoming messages (e.g. the freedom to filter them, choosing whether or not to read them, and so on), sales support for businesses, creation of additional services, frequent software updates, low cost of operation, multiple file format compatibility and 'shareability'). The contents of this list strike a chord with findings from two case studies: one reveals that usability, design of application and additional facilities are the premier source of Thai users' satisfaction with LINE (Cherdchusilp & Yenjabok 2014), while the other shows that access to social networks, the ability to exchange diverse message/media types, enjoyment and participation in the modern (i.e. IT-driven) lifestyle, are the most prominent factors that influence an adoption of LINE (Tansupong 2014).

One thing that the above conclusions have in common is a focus on the general practicality that LINE brings to users, for whom the more convenient, more functional, and cheaper circulation of messages made possible by LINE satisfies their lifestyle demands in ways not available in other IM services. A more socially-informed consideration will make it even clearer that the LINE *prosthesis* (to use Mey's (2009: 8ff) metaphor) materialises (and restricts) human's affordances in a much wider perspective than that of people's lifestyle.

In the subsections that follow, I will attempt to bridge this descriptive gap by foregrounding the wider social implications of using LINE in Thai society. Special focus will be given to the preoccupations and concerns of LINE users while they are going about their daily routines, and to how they handle the multiple follow-ups that result from their LINE-mediated activities. Public comments in online discussion forums, as well as contents of online newspaper articles and personal weblogs that touch upon issues relating to LINE usage form the basis of this investigation. Illustrative examples are drawn from the titles of discussion threads/weblogs and/or news headlines. The bulk of the internet resources was posted during a period of approximately 3.5 years, between early 2013 and mid-2016 (for names of the websites cited, see the Appendix). The transliteration of the Thai language tokens is based on the work of Tingsabadh and Abramson (1993).

3.1 Benefits from LINE

3.1.1 *Multiple identity portrayal*

LINE is primarily a social networking application that serves not only social, but transactional and many other practical purposes. Of these, social affordances appear the most recurrent purpose that people associate with using LINE. LINE has become an integral part of life experience for dozens of millions of Thais, who use the application to send messages to peers, discuss a travel plan with co-workers, flick through a stranger's Timeline, play a LINE game and much more. While doing so, they gain limitless opportunities to reach out to a broader (virtual) social world, ultimately intending for others to recognise and accept them and their choice of self-expression. An interpersonal approach to how users manoeuvre different versions of the self, in particular, while on LINE Chats making friends (and foes), settling a business deal, voicing their grievances, entertaining themselves, etc. underlines how a communications instrument was made to adapt or, more specifically, is manipulated to adapt, to its users' satisfaction.

The observation that people have not only one identity but multiple identities, and that they may choose to project one identity succeeding another, or several of these simultaneously has been well attested in sociological theory (e.g. Goffman 1956) and in many studies on online communication (see, for instance, Allington 2012; Johansson 2014; Zhang & Kramarae 2014). As regards the current study, the issue of identity manifests itself from the very beginning of a relationship with LINE. Users have the liberty to register a LINE account either with their real or imagined user name, an option not possible with a Facebook account, where a real name – hence a real identity – must be provided. Switching between language styles of varying degrees of formality (e.g. through choice of grammar, vocabulary and orthography) is a standard means that most users draw upon for identity construction. As is the case with other IMs, users may also have recourse to LINE in order to, for instance, perform a preferred on-line identity that they anticipate their audience will find attractive; or they may use LINE as an optional channel through which they carry out tasks with their usual off-line identity. Example (1) illustrates a web-based discussion topic: the debate is about men who employ *cute sounding* (as opposed to *masculine sounding*) words and expressions when talking to women on LINE (cf. Wolf 2000: 831–832). Example (2) shows comments of a user who removes 'pleasure' out of the equation when communicating with co-workers through LINE on her PC.[2]

2. The square bracketed [1] refers to the website used. See the Appendix.

(1) pʰûu.tɕʰaaj tɕʰáj kʰam ʔɛ́p bɛ́w kʰuj naj laaj sǎaw sǎaw tɕʰɔ̂ɔp kan máj kʰɾáp [1]
('Do you like it when men use cute-sounding words while on LINE?')

(2) sùan mâak tʰam ŋaan jùu nâa kʰɔm kʰàʔ lɛ́ʔ sùan mâak kɔ̂ɔ mii kaan sàŋ ŋaan taam hǎa kʰon naj bɔ.ɾi.sàt pʰàan laaj kan dûaj ɾaw wâa sa.dùak dii khàʔ [1]
('I normally work from my PC. We exchange work assignments and locate colleagues via LINE. I think this is very convenient.')

Stickers also have potential to help shape identities, aside from simply functioning as a replacement of and/or a supplement to typed messages and emoticons. Users may send a lone sticker to imply an attitude and other emotional dispositions that they do not want to put into words, or send one or a series of stickers to exchange a mixture of meanings (e.g. symbolic and interpersonal) as well as identities (e.g. *master, interactional* and *personal*, three dimensions of identity introduced by Tracy and Robles 2013: 21–24). Imagine the complex identity work that is at play, say, when a timid teenage girl sends her middle-aged male lecturer a sticker like the one second from the right in Figure 3, which showcases a sporty African-looking man, with a caption indicating the mild degree of agony that he harbours.

While being a digital space for people to construct and display their *own* identities, LINE takes on an added dimension at the same time: that of a window through which we witness diverse facets of *others*' identities. An interesting aspect of this has to do with cases where we discover other LINE users' alternative role(s), different from the role(s) that we have hitherto known to be a typical representation of their personhood. Parents and their changing identities after entering the LINE community are a subject of much discussion by their children and by netizens in the same age range (see Example (3)).

(3) pʰûan pʰûan kʰuj laaj kàp kʰun pʰɔ̂ɔ kʰun mɛ̂ɛ lɛ́ɛw ʔɛ̀ɛp ʔom jím bâaŋ máj kʰɾáp [1]
('Does it make you smile when chatting on LINE with your parents?')

(4) jîŋ laaj jîŋ klâj kʰun mɛ̂ɛ kʰɾaj lên laaj bâaŋ kʰáʔ maa tɕʰɛɛ kan kʰàʔ [2]
('More LINE chat, more closeness. Does your mum use LINE? Please share your views.')

LINE performs a role of bridging the parent-child generational divide and thus redefining the pre-existing affinity of those involved. More often than not, parents are assumed to belong to a generation who are not too well-versed in the new technology. But such a perception is slowly being eroded in the mind of those people whose parents are avid LINE users. Example (4) also illustrates the way family members are brought closer together, not least emotionally, thanks to LINE. In the same post, the author mentions the fun-loving side of her mother and the kind of informal language and cute stickers her mother is so fond of using. Harper et al.

(2008: 28) made a thought-provoking prediction that in the year 2020, "[people getting older will] want to remain active in ways previous generations did not." One way forward, in Harper et al.'s (ibid.) estimation, is that they will pursue a healthier lifestyle, which includes benefitting from online support communities and, of course, engaging in social networking applications and games. We can see from the above that this trend is already making itself felt quite strongly on the part of many 'silver-haired' LINE users in Thailand in recent years.

3.1.2 *Shaping new practices*

Just as LINE takes a firmer hold in the process of identity definition among Thais, new practices of doing things and developing new attitudes to tasks often emerge as a result. At the early stages of its inception, LINE was lauded mainly for its capacity as an informal tool for staying in touch. Soon afterwards, the practice variously called *kaan lên laaj* ('playing/using LINE'), *kaan kʰuj laaj* ('chatting on LINE'), *kaan sòŋ laaj* ('sending a LINE message') or simply *laaj* ('[communicating via] LINE') began to be part of everyday conversation among LINE enthusiasts across the Thai social spectrum. In the following two examples, the institutionalisation of LINE by professionals for professional purposes is another reason behind the wide acceptance of LINE in Thailand. Regular references are made to occasions when colleagues count on LINE for in-house communication (such as forwarding memoranda or convening meetings, as shown above in Example (2)) or when businesses and government sectors provide their LINE IDs to the public for further contact with them.

(5) tɕʰέt laaj fɛɛn tìt tɔ̀ɔ lɔ̂ɔ tɕàp tɕoon ŋát bâan lǎaj lǎŋ [5]
('Police managed to lure and arrest a serial house burglar by borrowing his girlfriend's LINE account to chat with him' [which led to his arrest])

(6) laaj sa.tík.kɤ̂ɤ pʰûa pʰɤ̌ɤj pʰrɛ̂ɛ kʰâa ní.jom kʰɔ̌ɔŋ kʰon tʰaj sìp sɔ̌ɔŋ pra.kaan [3]
('LINE stickers for disseminating 12 major Thai values')

Of note is how disciplinary/moral issues at the societal level are dealt with by the strategic use of LINE by government agencies, such as by the police force (Example (5)) and communications authorities (Example 6).[3]

3. The headline in Example (5) is self-explanatory, but the caption in Example (6) requires additional clarification. It is part of an official campaign of the Ministry of Information and Communication Technology of Thailand in December 2014, to highlight an awareness regarding the maintenance of traditional Thai values. To achieve this end, the Ministry offers a set of 12 free stickers as a new year's gift to LINE users whose accounts were registered in Thailand.

3.2 Adaptivity taking its toll

3.2.1 *'General' secondary effects*

In Section 3.1, we considered the ways LINE is put to use from an adaptability-oriented perspective. In other words, we looked at how the application is manipulated to the benefit of those individuals who employ it to stay in touch and to execute day-to-day tasks. Nevertheless, LINE may soon turn out to be a thorn in the flesh for its users. Mey (2009: 9) cautions us against an adaptive prosthesis's *secondary effects*, or negative side effects that are often unintended (or taken for granted) at an early stage of development and use of new technology. Many adverse consequences that can emerge from a too liberal use of mobile phones for making calls, sending IMs and engaging in other forms of social media have been identified. Amidst the consequences that are most responsible for putting humans' well-being and mental health at risk are: text neck syndrome (Taylor 2011), mobile phone addiction (Hong et al. 2012), text-message dependency (Igarashi et al. 2008), phantom vibrations (Drouin et al. 2012), social anxiety (Pierce 2009) and reduced sociability (Atkinson & Castro 2008b: 147–179). Although these conditions are generally valid for many LINE users, they are not topics of discussion regularly found in the contexts to be investigated in what follows.

3.2.2 *Problems of communication*

The communication format provided by LINE is very similar to how ordinary conversation is structured. For many Thai smartphone users, chatting face-to-face has become a rarity and is being largely replaced by chatting through social media channels, especially LINE. LINE offers a very important alternative for not only keeping in touch and making friends, but also for maintaining an argument and even terminating a long-standing friendship.

LINE can be a factor that easily gives rise to diverse problems of communication. Users may indulge themselves in "constant connectivity" (Takahashi 2014: 187) using LINE, but this does not necessarily mean that they communicate with one another to reach a significant degree of understanding (in terms of both content and rapport). Adler and Rodman's (2009: 26) injunction that "[a]lthough it is certainly true that not communicating enough is a mistake, there are situations when *too much* communication is a mistake" [emphasis in original], is relevant here. It is bad enough in ordinary conversation when people's friendship and camaraderie are threatened when one or more participants in the talk do not abide by the rules of 'adjacency pairs' (Sacks & Schegloff 1973), or when one party sends a message with a particular intention in mind, but the same message is interpreted or received differently by the other party at the receiving end. Communicating via LINE may worsen the matter, mainly because there is less potential for problems (both actual and imminent) to be rectified in their entirety, and because of the lack of contextual clues that could help attenuate objectionable messages. LINE users have every opportunity to send messages to their recipient(s) as long as their mobile device and internet connection are on, but many choose not to proceed in ways that would otherwise lead to smoother interaction. This complication can additionally be seen in instances of delay in delivery of (or not responding to) messages, which can subject expectant recipients to considerable agony, as in Example (7).

(7) tɔ̀ɔp laaj tɕʰáa pen ɾʉ̂aŋ pa-ka-tìʔ ɾʉ̌ʉ kʰwaam tɕiŋ mâj jàak kʰuj kàp ɾaw [1]
(‘Is it normal if someone takes time to respond to LINE messages or does it mean the person doesn’t want to talk to us?’)

(8) tʰâa kʰuj laaj lɛ́ɛw tɔ̀ɔp pen sa.tík.kɤ̂ɤ (mâj pʰim) jùu ta.lɔ̀ɔt we.laa plɛɛ wâa [1]
(‘What do people mean when they keep responding to LINE messages with stickers, with no typed response)?’)

(9) mii wí.tʰii bɔ̀ɔk jâat pʰûu jàj naj laaj jaŋ ŋaj dii kʰá wâa mâj tɔ̂ŋ sòŋ ɾûup sa.wàt. dii ɾʉ̌ʉ dɔ̀ɔk máaj hâj tʰúk wan kɔ̂ɔ dâaj [1]
(‘How should I tell relatives or senior people that it is alright not to send stickers with a greeting message or flowers [to me] everyday?’)

(10) kʰun kʰɤɤj tɕʰâj máj sòŋ laaj pʰìt hɔ̂ŋ [1]
(‘Have you ever sent LINE messages to a wrong group?’)

Distress caused by using LINE can be experienced by the receiving party in yet another way: that is, when friends and acquaintances choose to rely solely on stickers in response to messages (Example (8)), or when well-intentioned stickers, sent from senior relatives and older people, are perceived by younger users as *junk*, or at worst pointless (Example (9)). In the data, there are also many incidents where the sender’s own actions appear to be a source of annoyance for him/herself. Inadvertent delivery of messages to the wrong addressee(s) or group (as in Example (10)) constitutes a classic case of poor manoeuvring with LINE that can deliver an embarrassing blow to the careless sender’s ‘face’ and/or ‘identity’ (Spencer-Oatey 2008). This user experience can now (partly) be solved with the ‘unsend’ feature (launched in 2017) (see further in 3.3.1).

Chutamanee Onsuwan (p.c.) has pointed out a recurrent practice among certain users: leaving a LINE chat group. In ordinary (i.e. unmediated) conversation, expressed emotions like satisfaction, trust, surprise and hatred can, in most cases, be readily detected. For instance, if someone cuts short a conversation, gazes into another direction and walks away, judging the person’s state of mind is a more or less straightforward business. Leaving a LINE group is, however, often associated with a more complicated guesswork on the part of the receiver (but is technically an easy way out on the part of the sender). Contextualisation cues may be more scarce and delayed. But even so, there are always hints to suggest whether the leaving person (by simply hitting the 'leave group' button, without providing farewell expressions or other illocutionary niceties) merely has nothing else to say or he/she is no longer willing to invest time and effort in retaining a social bond with other group members.

3.2.3 *Reduced performance*

Using LINE permeates many aspects of both student and professional life. Talking about the secondary effects of LINE on academic performance reminds us of the under-achieving students who are reported as being addicted to social media, including LINE (Example (11)). This evidence fits well with Junco and Cotten's (2012) finding that using ICTs (i.e. Facebook and IMs) while doing schoolwork is commensurate with a lower GPA. In a comparable manner, falling productivity of employees caused by their 'flow' with LINE (see Section 2.1) is a usual target of grievances by executive staff (Example (12)).

(11) wí.tɕaj pʰóp sa.máat.foon nóot búk tɕʰùt pʰǒn kaan rian hâj lót loŋ [4]
('Research found that smartphones and notebook computers cause decline in academic results.')

(12) pʰa.nák ŋaan lên laaj naj wee.laa ŋaan tʰam ŋaj dii [5]
('My staff use LINE during working hours. What should I do?')

(13) laaj krúp kʰuj ŋaan kʰɔ̌ɔŋ ʔɔ́ɔp-fít sùt tʰáaj lɛ́ɛw pen kʰɔ̂ɔ baŋ.kʰáp rʉ̌ʉ taam sa.màk tɕaj [1]
('Is chatting with colleagues in LINE groups compulsory or voluntary?')

(14) kʰít jaŋ ŋaj mʉ̂a paj hǎa mɔ̌ɔ lɛ́ɛw mɔ̌ɔ lên laaj paj dûaj [1]
('What do you think about doctors using LINE during consultations?')

In some organisations, the role of paperwork and physical meetings is shrinking, giving way to the use of social media such as LINE, through which colleagues are expected to work and collaborate with one another. Such a tendency may help improve work flexibility, profitability and customer satisfaction, but it also inevitably creates peer pressure, leaving co-workers who prefer a more traditional working environment, with not much choice but to comply in order to secure a pleasurable interpersonal atmosphere and even their career. Conservative co-workers (i.e. those preferring face-to-face interaction) are not the only group of people who are not in favour of more reliance on LINE in the workplace (Example (13)). Dissatisfaction has further been voiced by customers and the public on what they perceive to be a decrease in professionalism among the workforce staff, observed to be busy using LINE at work (Example (14)).

3.2.4 *Online threats*

There is perhaps no other area where adaptivity takes its toll on users (and/or those that fall victim to other users' negative practices) as massively as in that where risks of cyberattacks and a practice known in Thai as *laaj lùt* (literally 'LINE leak') are at play. In a general sense, cyberattacks are associated with "deliberate attempts by unauthorised persons to access ICT systems, usually with the goal of theft, disruption, damage, or other unlawful actions" (Fischer 2014: 1). Even though attackers in my data often did not attempt to access anyone's LINE account, the fact that they tampered with someone LINE's ID without the owner's consent is sufficient evidence of their intention to cause harm to an ICT system, and thus represents an implicit form of cyberattack. Typical scenarios involve the attackers' reproduction of profiles of, e.g., media personalities (but also of members of the general public); the offenders then take on the stolen IDs to pursue illegitimate acts either on- or off-line, or both.

(15) ɾûap nùm ʔâaŋ tua pen daa.ɾaa kʰuj laaj luaŋ sǎaw kʰòm.kʰɯ̌ɯn kɔ̀ɔn lák sáp [6]
"Man, self-proclaimed as actor who used LINE chats to rape and rob women, now under arrest"

(16) tɯan pʰaj doon mít.tɕʰǎa tɕʰîip plɔɔm laaj ʔék.kʰáw lɛ́ɛw paj lɔ̀ɔk hâj pʰɯ̂an ʔoon ŋən [1]
('Warning! A thief has forged my LINE account and requested a money transfer from my friends.')

It is in this way that, for instance, a rapist/thief manages to exploit vulnerable users' eagerness to enter into a romantic relationship, and turn this into a damaging experience for them (Example (15)); in another case, a criminal obtains a monetary gain from friends of a user by using het/his duplicated LINE account (Example (16)).

Adverse consequences caused by LINE leak is another danger resulting from LINE's adaptivity that is worth mentioning in connection with the risk of cyberattacks. Ideally, one aspect of a quality life style requires that people's private lives be kept private; however, maintaining this quality in the cyber age may be among the most far-reaching goals ever, given that any user of LINE, and anyone in his/her environment, now is easily exposed to privacy intrusion in one way or another through a LINE leak. Examining the secondary effects of shareability on people's privacy and long-term reputation, Solove (2007: 2) offers a pertinent remark: "[i]ncreasingly, people are exposing personal information about themselves and others online. We can now readily capture information and images wherever we go, and we can then share them with the world at the click of a mouse." Example (17) is one among the dozens of real-life anecdotes depicting how personal issues of people in the limelight that initially were the subject of a one-to-one LINE chat, became public knowledge across the mediascape in a matter of hours. The danger is real enough, and once the harm is done, there is very little possibility to limit its spread. Even though the public's interest in gossip may wane in due course, the minutest details of a tarnished reputation can be stored permanently, in countless forms, and "be retrieved and forwarded in ways that can only be imagined in your worst dreams" (Adler & Rodman 2009: 22).

(17) kʰwaam láp mâj mii naj lôok laaj pʰôn pʰít súp.taa ɾiaŋ nâa tɕʰǎaw [7]
('No secret in this world. LINE intoxicates scandalous superstars.')

(18) tɕʰɯ̂a mǎj féet.búk lɛ́ʔ laaj pen sǎa.hèet hâj kʰûu ɾák nɔ̂ɔk tɕaj kan mâak tʰîi sùt [1]
('Do you believe it that Facebook and LINE are the most powerful impetus that leads lovers to commit adultery?')

(19) tʰam.maj kʰûu ɾák kʰûu tɕʰii.wít tʰɯ̌ŋ mák kʰâa kan taaj pʰɾɔ́ʔ rɯ̂aŋ laaj féet. búk kan mâak naj sǎŋ.kʰom tʰaj [1]
('Why do lovers and soul mates kill one another so often because of LINE and Facebook in Thai society?')

While threats to LINE users' reputation and dignity are among the least memorable ordeals described above, murders and other internet-related deaths are undoubtedly the most destructive effects of LINE leaks that human beings can inflict on each other (see also Flores 2014), or even on themselves (see also Luxton et al. 2012). Based on the data gathered in the context of the current discussion, couples' estrangement, betrayal and adultery (as in Example (18)) are the fundamental predictors of relationships ending in fatal tragedies, with deaths occurring as a result of LINE leaks. Example (19) typifies well-known cases of such leaks that have frequently led to homicide/suicide.

3.3 Reacting to the challenges of adaptivity

Moving on from the advantages and disadvantages of using LINE, the current section outlines, first, the measures that have been undertaken to address the challenges facing users as the result of bad use (or even abuse) of LINE, and second, what the users themselves do in reaction to such challenges in their daily activities.

3.3.1 *Institutional intervention*

Efforts on the part of institutional authorities in counteracting the above risks deserve some mention. First, there is the manufacturer's contribution. Ever since its inception, LINE Corporation has been committed to steadily enhancing its users' experience through successive updates of the LINE app, mainly by integrating additional services and features, some clearly destined to preempt the threats of adaptivity described in Section 3.2. Considering that for many people, social connectivity is the most salient purpose of their using LINE, three useful features have been developed whose primary role is to protect users against interpersonal conflicts before matters get out of hand. They are: (1) pop-up notifications (displaying the contents of an incoming message without the sender being informed that (initial) parts of his/her message have been read by the recipient), (2) the 'hidden chat' function that allows users to send time-limited messages: the sender pre-sets an amount of time for reading a message, after which it will be automatically deleted, and (3) the 'unsend function', which cancels the delivery of a message, provided that the intended receiver has not opened and viewed the unwanted information (LINE Corporation 2017). That said, beyond offering such basic preventive measures to safeguard the dynamics of internet relationships, LINE Corporation seems to not have much control over how the use of the LINE app affects people, either in terms of their general well-being or of their other, more performance-oriented activities, not to speak of supervising all the innumerable other ways the application can be put to use.

Here it is worth recalling Atkinson and Castro's remark that banning or restricting computer applications is not as feasible a solution as "enforcing appropriate rules and practices governing privacy and civil liberties." (2008a: 173). When, during a week in late December of 2014, the Thai media was inundated with news that the Thai ICT Department was monitoring 30-million LINE conversations in the country (on the suspicion of infringements of the *lèse-majesté* laws), LINE Corporation was quick to point out the sheer impossibility of a third party censorship for this purpose (Example (20)).

(20) laaj tɕɛɛŋ mâj mii kaan trùat sɔ̀ɔp kʰɔ̂ɔ kʰwaam tɕàak tʰaaŋ kra.suaŋ ʔaj.sii.tʰii [8]
('LINE Corporation announced there has been no investigation into [LINE] messages by the ICT Department.')

(21) hùaŋ dèk tìt laaj sɔ̀ɔ mii pʰrɯ́t.ti.kam kʰɛ̌ŋ kra.dâaŋ [8]
('[The Department of Mental Health expressed] concerns over signs of rude behaviour among LINE-addicted youngsters.')

When official authorities do not have the right to interfere with, or even intercept, LINE-related activities, often the only possible (but not always successful) way to go is for them to start an awareness-raising campaign. So far, there have been regular interventions by education administrators (see, for instance, Example (11)), as well as by agents in the Thai government and private sectors, in an effort to inform the Thai population of the darker facets of using LINE (Example (21)) – however, so far to little avail.

3.3.2 *User reactions*

Of course, the goodwill of those officially worrying about the threats embodied in LINE's adaptivity is not to be taken for granted, so decisions and judgments about whether or not to use (or continue to use) LINE seem to rest upon its users. There is no question that for each individual user, using LINE has merits of its own, and therefore, it does not matter how risky or how difficult it is to use LINE, as long as the benefits are sufficiently great (cf. Norman 1999: 24). The majority of comments in the headlines studied here show that users feel they can deal with the purported risks, and that they show no signs of radically modifiying their LINE-oriented bahaviour (e.g. by reducing or discontinuing their use). Since there seemed to be little that users could do to change the situation, a preferred self-healing technique was to simply adjust the way they think about LINE (or, more accurately, their involvement in LINE) by accepting it the way it is.

(22) wí.tʰii tʰam tɕaj lǎŋ doon pʰɯ̂an blɔ́k laaj [1]
('How to put up with being blocked by friends from LINE chats')

(23) kʰɔ̌ɔ ʔà.nú.jâat ɾa.baaj baaŋ tʰii kʰɔ̂ɔ jàak bɔ̀ɔk pʰûu làk pʰûu jàj ɾɯ̂aŋ kaan tɕʰɛɛ kʰɔ̂ɔ.muun mûa mûa naj laaj tɛ̀ɛ bɔ̀ɔk mâj dâaj tɕàʔ dɾaa.mâa ʔaw [1]
('May I say something? Sometimes I feel I want to warn elderly people about sharing muddling information via LINE. But I'd better not open my mouth, if not, drama will ensue.')

(24) ɾaw tɕa sâaŋ sǒm.ma.dun ɾá-wàaŋ tɕʰii.wít sùan tua lɛ́ʔ kaan tʰam ŋaan naj júk tʰîi ték-noo-loo-jii kʰâw tʰɯ̌ŋ tua bɛ̀ɛp níi dâaj jaŋ ŋaj kan bâaŋ kʰɾáp [1]
('How do we balance our personal and professional life in the current era where technology keeps intruding on our privacy?')

Acquiescing sentiments such as the above may be inferred from the way the queries and comments are phrased (for instance, *tʰam tɕaj* ('to put up with'), *bɔ̀ɔk mâj dâaj* ('cannot/should not tell') or *sâaŋ sǒm.ma.dun* ('to create a balance') and incorporated into the posts. These include incidents where people accept the ordeal of being shunned by friends (Example (22)), remain silent in order not to cause offence to elderly people (Example (23)), or maintain a sense of coherence with other netizens and LINE members, both at home and at work (Example (24)).

3.3.3 *Resilience*

Studies tapping into the effects of the unexpected tend to construe a phenomenon known as a 'maladaptive process' (Sutcliffe & Vogus 2003: 94–95), which may lead to chaos and, in the worst case scenario, a complete dysfunction of the vulnerable entities (e.g. organisations and individuals). However, based on the concept of resilience, several researchers uphold a principle to the contrary, namely that people or groups of people have capacities to "continue to achieve desirable outcomes amidst adversity, strain, and significant barriers to adaptation or development" (Sutcliffe & Vogus 2008: 498). The ability to stretch without breaking and, as a consequence, to recover their shape (either quickly or slowly; Weick & Sutcliffe 2015: 98) is an attribute possessed by the many resilient LINE users in the present study. For instance, Examples (22) to (24) relatively clearly indicate the users being prepared to alter their mindset in order to cope with unfortunate incidents caused by using LINE; as a result, they (re)emerge to thrive and re-emerge with more flexibility and immunity in dealing with life's uncertainties (see also Ungar 2015).

(25) kʰlíp daa.ɾaa lùt wɔ̂n nèt ɾɯ̂aŋ ciŋ rɯ̌ɯ sâaŋ kɾa.sɛ̌ɛ [9]
('Celebrities' clips leaked on the Internet: real or self-promotional?')

(26) boo tɕʰɛ́ʔ pʰâap kʰûu pǎŋ bɔ̀ɔk tʰùuk kʰɔ̌ɔ laaj [10]
('Booth babe Beau had a photo taken with actor Pang, who, she claimed, has asked for her LINE ID.')

In Section 3.2.4, I touched upon how celebrities' private moments become exposed to the public and how these episodes cause turmoil in their lives and may damage their reputation. To add further complexity to the picture, there is some evidence showing how these LINE users transform crises into opportunities. Relevant cases have to do with what started as rumours and, later, turned out to be intentional LINE leaks, made available by the media figures themselves with the purpose of maintaining their public profiles (and securing their future careers) in the face of the fierce competition in the entertainment business (Example (25)). Similarly, deliberate posting of evidence (e.g. chat logs and photographs) of clandestine relationships with celebrities is a shortcut to fame that wannabe celebs deploy in the hopes of entering a social space otherwise not easily accessible to them except by sheer perseverance (Example (26)).

If, in our foregoing discussions, young children and minors have been an underrepresented population of LINE members, it is because of the manner that many of these young internet/LINE users react to the threats of LINE's adaptivity. (This actually is a subject of mounting concern among the older generations). Example (27) illustrates a case in point.

(27) kʰɔ̌ɔ.tʰaan ʔɔɔn.laaj ɾáp sa.màk ʔép.sii dèk sa.mǎj níi jàak dâaj kʰ ɔ̌ɔŋ fɾii jàak mii fɛɛn kʰlàp [9]
('Online beggars recruiting fan club members. Children these days in need of freebies and their own fan club.')

This snippet of a news coverage summarises the preoccupations of a group who have come to be known as *kʰɔ̌ɔ-tʰaan ʔɔɔn-laaj* (literally 'online beggars'): that is, young pre-adolescent Thais who aspire to attain the level of attention, recognition and material affordances enjoyed by the superstars and net idols to whom they feel strongly attracted. A prevalent practice among these early teens (the so-called *Selfie Gen*) is to recruit their own club members, who must fulfill certain criteria in order to qualify. Requirements include being in a similar age range, having the ability to deliver requested presents in accordance with pre-set frequencies, showing willingness to use a specific language/language style and to sport a particular style of clothing, etc. What seems the most worrying is the fact that these youngsters deliberately post their LINE ID, national ID number and other personal details on the internet, presumably without giving much thought to the kinds of danger they expose themselves to.

Whether we like it or not, the present era is one in which an increasing number of parents have fewer opportunities to take care of their children, even when they are physically together in the comfort of their home. Currently, we also see tech-savvy youngsters often maintaining multiple 'para-social' friendships with like-minded others in cyberspace, leaving their parents and caretakers who are not (as) technologically literate, with less authority in determining a child's developing personality and identity (Giles & Maltby 2004: 814). According to research undertaken by by EU Kids Online, EU children between the ages of 11 and 16 were resilient enough to tackle online risks (e.g. sexual images, online bullying, sexting and meeting new contacts online) by means of many coping strategies. And quite surprisingly, they managed to do so with or without their parents and teachers' intervention (d'Haenens et al. 2013; cf. Livingstone & Ólafsson 2011) – which calls into question if youngsters born into the cyber-age are as vulnerable to online threats as many adults have been at pains to point out.

Returning to our current discussion, there is at present little empirical evidence attesting if similar coping mechanisms are operative among these young Thai users of LINE, in particular among the 'online beggars' mentioned earlier. Even so, the subtler message conveyed is that it may well be that these minors construe themselves as belonging to an emerging youth (sub)culture, equipped with a new collective mindset having its own standards of acceptability, as well as judgments and ways of handling things specific to its group members (see Theron et al. 2015). Chances are that what we adults view as online threats may be just mundane, everyday matters to these youngsters. It remains to be seen, of course, how the situation will develop as these minors enter later stages in life, where technology will create yet further impacts upon human affairs, always beyond the imagination of previous generations.

4. Summary and conclusion

In light of Mey's (1998, 2009) adaptability-adaptivity dichotomy, this chapter has investigated the ways in which users of the LINE chat application in the Thai speech community rely on the app for various practical and relational purposes in the course of their everyday lives. I have demonstrated that both adaptability (i.e. users operating LINE in accordance with their needs and to their own satisfaction) and adaptivity (i.e. LINE forcing its limits on users' affordances) were seen to be at work in many of the selected examples. Upon reflection, we may contend that adaptability and adaptivity are relative concepts when approached from different angles. Even for an average LINE user who feels that LINE has been satisfactorily tailored to his/her unique experiences and needs, there is always a certain degree of adaptivity that jeopardises his/her own personal, social and/or professional life in one way or another. Moreover, since in most cases LINE operates as an interactive social medium, what one user considers to be an advantage of using LINE, may turn out to be an obstacle affecting another user in a negative way. An additional dimension I have incorporated into the analysis highlights reactions towards LINE usage on the part of users and society members at large. Evidently, even though a solution is close at hand that can mitigate certain negative consequences related to LINE, a sizeable number of users choose to continue using LINE, managing to survive the concomitant adversities regardless, and ultimately becoming well attuned to the daily routines of which LINE has become an indispensable part.

LINE, in fact, has become a firmly established practice of communication among people from far and wide and across the Thai societal spectrum, and there is no sign that the trend's popularity will abate in the foreseeable future. Theorizing the notion of *technology as tool* incorporates two fundamental ideas. One is that the mission of the tool – be it a crutch or another prosthesis – is to augment human faculties and affordances; the other, that the adaptation should, in any event, be unilaterally directed: technology should be invented and designed to adapt to the human user only, rather than technology forcing the user to adapt to the limitations imposed by the technology in question. Gorayska and Mey speculate that, if adaptivity is an unavoidable state of affairs, "*how* we should adapt, and on *whose* premises" [(2004: 5; italics in original]. Since its inception, LINE Corporation's efforts of adaptation have coincided nicely with the needs of an increasing number of users, who have taken advantage of the application to pursue their own pastimes, as well as to interact with others for a myriad of purposes germane to their 21st-century lifestyle. In other words, this is, *ceteris paribus*, a win-win situation where both parties achieve their goals.

Mey (2009: 13) offers a final word of caution that "the computer tail should never be allowed to wag the user dog." One may play the devil's advocate to his caution by arguing *what if the user dog doesn't get hurt or doesn't mind being wagged by the computer tail*? However, this should not stop us from finding further ways to assist users of LINE (and any other IM technology) in coming to terms with the adaptability-adaptivity dilemma, as it turns up in the various chat application(s) of their choice and their internet-dependent pursuits. Admittedly, the challenges involved in such an enquiry require input not only from academics and technology developers, but from official authorities, users and laypeople alike.

Human interaction is a social activity that has a lot to do with issues of adaptation – in fact, a popular saying has it that adaptation is a key to human survival. When human interaction involves the use of machines, the adaptation can be mediated by machines (e.g. as in CMC); at other times, adaptation is characterised by the complex relationship between human users and their machine(s) (e.g. as in HCI). It is the local contexts of communicating through/with LINE, and users' attitudes towards LINE and cyberspace at large, that can uncover the roots of the changes in Thai society's structure, as well as of Thai users' perception of themselves and those around them. The present investigation of LINE usage has outlined an interesting framework within which to discuss the ways Thai users of LINE juggle with adaptability and adaptivity, while constructing, contesting and reconstructing social relations in the ever-changing mediascape of the 21st century.

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SECTION IV

Adapting learning and teaching

CHAPTER 13

Apprenticeship in microbiology

Embodied adaptation to experimental and technological aspects of learning

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University of Texas at Austin

Based on participant observation of work in a big US university's molecular biology department, I discuss how students are guided towards becoming competent scientists. On joining a closely knit community of research and practice, the student has to adapt to an overwhelming environment of techniques, parlance, habits and social mores, while absorbing a massive scientific and practical input. In the apprentice system's,'learning by doing', the mentor-mentee relation and the students' interactions between themselves and with their studied objects (here, highly contagious bacteria) are more important than verbal teaching; but they also add pressure to the learning process. By adapting to this environment (which includes many smaller adaptive interactions), the apprentices create a solid foundation for their future teaching, research, and practice.

Keywords: science education, mentor/apprenticeship, learning by doing, embodied adaptation, hand/tool coordination

1. Introduction

Laboratory work is embodied practice. The practitioners' bodily resources constitute the major elements of this work, along with the highly specific environment surrounding the experimental work processes. Like all manual labor, scientific experiments make use of a variety of tools, both cognitive and embodied, as well as of material objects in the immediate context of the experimental situation.

Experiments in microbiology require skills and techniques that emphasize the adaptability of the practitioner's sensitivities and dexterity, especially with regard to operating the specific tools and instruments essential to microbiology.

An apprentice in the science of microbiology will, over the course of her training period, develop corporeal sensibilities concerning the spatial distribution of the

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laboratory environment; her embodied sense of space traces a cognitive map of the entire lab space in her corporeal memory.

Similarly, certain hand- and finger movements are repeated over and over again until they become an ingrained habit, a skill that is performed without conscious thought. Opening a tube with one hand, using the thumb to pop open the lid, pipetting micro-amounts of liquid into tiny tubes, spreading bacterial cultures on agar in Petri plates with a certain wrist movement – all those skills require intensive training and more than a little talent. These expressive uses of gesture occur even when the scientist is demonstrating a manual skill without necessarily holding a tool or object in her hand. The knowledge acquired in this context of bodily information processing illustrates how the corporeal memory retains a sensibility for how to perform the task; hand gestures and finger movements demonstrate embodied adaptability for skilled manual work.

In cases where researchers use larger tools to perform operations, experts use gestures to illustrate activities occurring within a machine or instrument that are otherwise invisible. What happens within a NanoDrop measuring instrument, for example, cannot be seen, but it can be efficiently visualized and conveyed to the novice by using illustrative hand movements as well as verbal explanation. This complex integration of words and gestures links the body to the tool environment, where tools and abstract symbols are included as co-participants in the experimental framework.

The gestures re-create objects to serve as actors in the learning process of the apprentice. The framework that is created in this way extends the participation within the framework to include the tool environment in more direct collaboration with humans than would be the case if one considered them as mere technical accessories. The adaptation to specialized professional tools and instruments represents an important learning process for the apprentice in microbiology as part of her journey towards expertise.

In what follows, I first describe the ecology of the lab, and the main types of interactions involved. Next, I discuss how learning in the lab is performed as an adaptive dynamic involving human and nonhuman actors, bodily learning, mutual attention, and embodied practices.

2. New trends in science education

At a seminar recently in the Department of Molecular Biosciences, UT, Austin, Dr. Erin Dolan, Executive Director at the Texas Institute for Discover Education in Science (TIDES), gave a talk about mentoring undergraduate researchers. The audience was made up of representatives from the different laboratories in the aforementioned department, both principal investigators, senior and junior researchers, and graduate students. The speaker made strong recommendations pertaining to future trends in science education. One of these recommendations proposed that undergraduate students in science be given real research experience in professional laboratories from the beginning of their studies.

Hands-on research opportunities would bring the undergraduate students into the social and technological research environment in their chosen fields, where they would be given 'one-on-one' mentoring by an advanced graduate student or postdoctoral fellow.

The 'learning by doing' experience with a trained mentor would prove both challenging, interesting, and fun, something that science education so far may not have been for the majority of undergraduates. According to Dr. Dolan, her institute was concerned about early recruitment to the study of the natural sciences, and was actively seeking ways to make science studies more attractive for the young students. Learning that failure can be part of every experiment is necessary in the student's cultivation of scientific patience and stamina. At the same time, feeling the excitement over new discoveries is empowering, and could motivate the students to seek future careers in research.

The response from the audience was mixed. Some laboratories already welcomed certain gifted undergraduate students from different honors programs, but could not envision extending this privilege to an entire class. Others were unconvinced that enough funds and trained researchers could be made available for this enormous educational task. There was general consensus, however, that this approach would represent a considerable improvement in basic science education, given the necessary funding.

3. Apprenticeship in microbiology

As mentioned in the previous section, some laboratories already welcome gifted undergraduates with definite plans for a career in the natural sciences. My own research involved observing interaction between experts and novices in one microbiology laboratory, as it was realized in both experimental and social situations. My interest in multimodal communication in an apprenticeship situation favored the study of gestures and hand movements, as well as of facial expressions and body moves. Since experimental work in microbiology involves a lot of manual labor where competence and experience are of the utmost importance, the practitioners' bodily resources constitute the major elements of this work. The embodied practice of the experimental work processes requires intensive training on the part of the novice, as she is introduced to the scientifically specific experimental work environment. A multitude of tools and instruments, small and large, both cognitive and embodied, confront the novice in her first period of training. Around the workbench where the experiments are conducted, the researchers assemble all the material objects, liquids, and chemicals necessary for the specific experiment. The novice is expected to acquaint herself with the immediate context of the experimental situation in order to work as efficiently as possible. Experiments in microbiology require skills and techniques that emphasize the adaptability of the practitioner's sensitivities and dexterity, and the beginning of the learning period is in part focused on operating, and adapting to, the specific tools and instruments that are essential to micro- and molecular biological research. The apprentice familiarizes herself with the entire laboratory environment, including the spatial distribution of freezers, incubators, dishwashers, and autoclaves. After some weeks of confronting all the necessary equipment in her workplace, the apprentice is able to trace a cognitive map of the entire lab space in her corporeal memory (Mey 2012).

In my research, I followed several such pairs of mentors and apprentices during their first three months of training. The apprentices were usually given their own projects to work on, sometimes an experiment related to the mentor's own experiment and expertise. The mentor followed the apprentice's progress closely, working side by side, assisting, and comparing results, as well as interacting verbally and non-verbally. At the end of the three months' rotation period, the apprentice gave a final presentation of her project to all the lab members, in a lab meeting. She received comments and criticisms and suggestions for improvement, and both the apprentice and her mentor learned a lot from these discussions.

My study of these pairs of mentors and apprentices focuses on types of learning in this specific scientific environment, especially on the roles that language and other semiotic modalities play in scientific apprenticeship. It demonstrates how learning takes place in a microbiology laboratory, and how knowledge is transferred from expert to novice through interaction and embodied action in an environment of scientific and technological professionalism.

In these learning situations, special attention is paid to the ways that the body and embodied actions supplement and enrich the communication between learners and teachers in the lab, and how meaningful social and scientific information is conveyed between experts and novices through the use of spoken, written, and embodied language.

Exploring this multimodality and the accompanying embodied practices highlights the importance of the manual labor typical of scientific experiments, and emphasizes the significance of embodied action (for example, iconic gestures, visual explanation, alignment, and orientation) in learning experiences and in the production of 'tacit knowledge' (on this, see below).

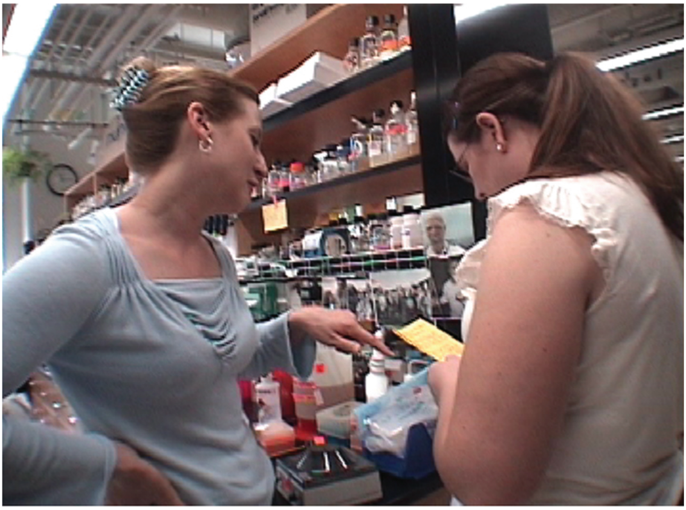

Figure 1. Mentor and novice working together

4. Adaptability to a scientific workplace

4.1 A new social environment

The apprentice faces several challenges in her new situation. As a new member of the workplace, she is faced with an unfamiliar social situation. The apprentice is expected to interact not only with her mentor, but with all the other lab members as well. Safety procedures require that everybody cooperates, keeping the lab as safe as possible. There are a great many duties that are shared among all the members, duties having to do with the maintenance of instruments and materials, as well as keeping everything clean and orderly. There are meetings and seminars where the students, as well as the other members, are expected to attend. The weekly lab meeting, where both new research and practical lab matters are discussed, is an important source of information and an important part of the apprentice's learning process. The Journal Club is a forum where new literature in the field is read and discussed. Often, there are guest lecturers and faculty from other department who give seminars where the students are encouraged to attend.

There are also parties and celebrations to take part in. In the specific lab I observed, Halloween was a big cause for festivity and costume parties, and birthdays were celebrated with elaborate cakes during lunch breaks. Every Christmas, there was a party at the house of one of the members, an occasion that everybody was looking forward to. Being part of a lab workplace is a much more comprehensive experience than just going to classes in different subjects; the workday is spent with a small group of colleagues, with a focus on one particular project, but also with a great deal of social interaction.

4.2 New terminology and scientific language

The apprentice in microbiology must adapt to new ways of communicating, and learn new vocabulary. Some students compare this to learning a new language. Lab discourse is made up of many different genres: written as well as spoken, verbal as well as nonverbal. Work procedures are described in both formal and informal manners, and often with extensive use of analogies and metaphors.

Working alongside the mentor, the apprentice is introduced rather gently to the scientific terms and vocabulary, as they both do their research; and since their interaction combines action with words, it helps the novice to better remember the procedures. While doing their experiments, the mentor and apprentice interact in their informal everyday language, joking, laughing, and making fun of each other and their objects, the bacteria. Names of bacterial cultures and their stages, as well as the scientific names of the different procedures adhere of course to strict scientific terminology. It happens, however, that the bacteria are given nicknames or referred to as 'guys', as when a researcher admonishes 'her' bacteria to: "come on, guys, grow up".

In lab meetings, where individual projects are discussed among all the members of the lab, presentations are given, using formal scientific language, with the precise terminology pertaining to the field of microbiology. In the beginning, the student apprentices struggle with the terminology, but with experience, and some help from their mentors, they are soon able to master the new terms. In Journal Club, where advanced and relevant journal articles are discussed and criticized, the same problem presents itself for the apprentice: the new professional language requires some effort and some time to be mastered. Daily cooperation and interaction with the mentor and the other members of the lab, however, help the apprentice overcome the initial difficulties with the professional terminology.

4.3 Adaptation to the objects, tools, and instruments of the scientific profession

A microbiology lab is a spectacular environment. It includes tools, from the tiniest tubes to the largest pipettes, as well as instruments that perform simple as well as complicated procedures. On the shelves above the workbenches, a colorful array of glass bottles, full of liquids of all kinds, captivates the eyes. For the apprentice, this must seem like a fascinating, but strangely confusing, work environment, with so many new and unfamiliar objects and tools to be confronted with.

Again, the mentor plays an important role in monitoring every step the novice is allowed to take. The adaptability to such diverse surroundings takes time and practice, and is only made possible by guided learning through action. By working alongside the mentor, helping with an ongoing experiment, the apprentice will soon reach the necessary proficiency, and will be allowed to conduct her own experiment. The mentor or the lab leader will design these experiments in such a way as to give the apprentice skills and practice in laboratory procedures, without creating too many frustrations. The mentor thus represents a major pedagogical influence in the scientific education of the apprentice.

4.4 Embodied adaptation

Apprentices in microbiology have to adapt to new ways of using their bodies. Laboratory work consists of a great deal of embodied practice, and the bodily resources of the practitioner constitute a major part of the work. Manual skills are important, especially with regard to operating the many tools and instruments essential to experimentation. Also the senses play a key role in scientific experiments: Eye-hand coordination, the sense of smell to detect undesirable odors, and the ability to evaluate temperatures are valuable assets when doing experiments in microbiology. In the following, I will focus on some of these embodied aspects of the apprentice's learning process.

Figure 2. Gaze and hands coordination

4.5 Embodiment in scientific practice

By far the most common manual skill to be developed is pipetting micro-amounts of liquids from one tube to another. With the tube in one hand and the pipette in the other, the tubes have to be opened with one hand, using the thumb to pop open the lid. This is not an easy task for the inexperienced apprentices, and they sometimes struggle hard to overcome their inability by using both hands somewhat awkwardly. Occasionally, they happen to drop a tube on the floor, and they have to start over with another tube.

After intensive training, the apprentice will master the technique of opening tube lids with one hand. She develops the right flip of the thumb, and her thumb has become stronger.

These hand and finger movements are repeated over and over again, until they become an ingrained habit, a skill that is performed without conscious thought. Fingers, especially the thumbs, develop very strong muscles, and after popping open tube lids for years, one mentor told me that she was even able to open beer bottles using only her thumb.

5. Manual sensitivity

5.1 The art of plating and spreading

Spreading bacterial cultures on a plate of nutrient agar requires flexibility of hands and wrists. The spreader (a sterile glass rod) must be moved lightly back and forth over the bacteria to secure an even spread. There are many different elements to consider in the spreading technique. One aspect is the duration involved in the procedure; here, the practitioner has to patiently move the spreader back and forth over the top of the plate. The number of strokes one has to apply to distribute the bacteria evenly throughout the surface of the plate is a matter of importance, as is the amount of pressure to exert. If the pressure is too light, the cells are not distributed well enough, and will end up in a big continuous patch, instead of as individual cultures that can be counted. If the hand movements are too heavy, the spreader goes right through the agar, and the whole plate is ruined.

Such sensory skills become parts of the scientist's body memory and are activated in new situations. The bodily knowledge involved here is mostly unarticulated, and goes by the name of 'tacit' knowledge. Such knowledge is not explicit and belongs to the single individual; it can only be learned from others by observation and imitation.

One of the mentors in my study demonstrated to me how her own spreading technique is embodied in her hands, by making spreading gestures with her hands without actually holding the plate. Her hands would do the movements as if she

Figure 3. Expert demonstrates her spreading technique

held the plate in one hand and the spreader in the other. Her preference was to hold the plate in her hand, because this is how she learned the technique when she was an apprentice. She recommends, however, that the apprentice use a turntable when spreading. The turntable that holds the plate is rotated with one hand, while the other hand moves the spreader back and forth over the plate. According to this mentor, most people in the lab prefer to use the turntable for stability and precision.

5.2 Spreading

```
Transcript Micro 13, clip 3, 4.51
Names of the participants are chosen pseudonyms
1 Steph:  So the next time she'll know how long she has to do it
2         ((making gestures of spreading, holding the imaginary
3         plate in her left hand and a non-existent spreader in her
4         right hand))
5  Inger: Uhum
6  Steph: and you know I mean she did it, and what pressure to
7         apply ((moving her hands in a downwards pressure
8         push))
9  Inger: Uhum
10 Steph: you can run it sort of over the top ((running her
11        right hand quickly back and forth)) like a million
12        times and=
13 Inger: Yeah
14 Steph: =and if you don't have the right, like you know,
15        ((making the same spreading gesture as in line 2))
16        yeah, it's definitely just a technique that you really
17        have to have to practice to be able to uhm
```

In this lab, there were several mentors or experts responsible for teaching an apprentice. In the following excerpt, Leia teaches her student to use the turntable, because she claims it gives a better result in case the apprentice is inexperienced. In demonstrating this technique to her apprentice, she used an extremely light touch when spreading the cells on the agar, just the right pressure for the bacteria to spread properly.

5.3 Leia using the turntable to spread

Leia: Okay, so here's the hundred microliter box one, and... <she squirts the bacteria onto the plate and removes the spreader from the ethanol> It's ethanol and it's flammable, so the drips will drip onto your bench, and if you don't watch out, you could...
Hilary: Catch on fire
Leia: Yeah, so you just wanna make sure it's dry and cooled a little bit, usually, like, touch something, not cells first, and make sure that it, sort of, it cools, not killing the cells. <spreading the cells on the plate> Okay, I guess you could flame and then stick it into the ethanol to kill it (xxx) So please, same thing with the <puts the other plate on the turntable> while you do that, we'll spin'em both down

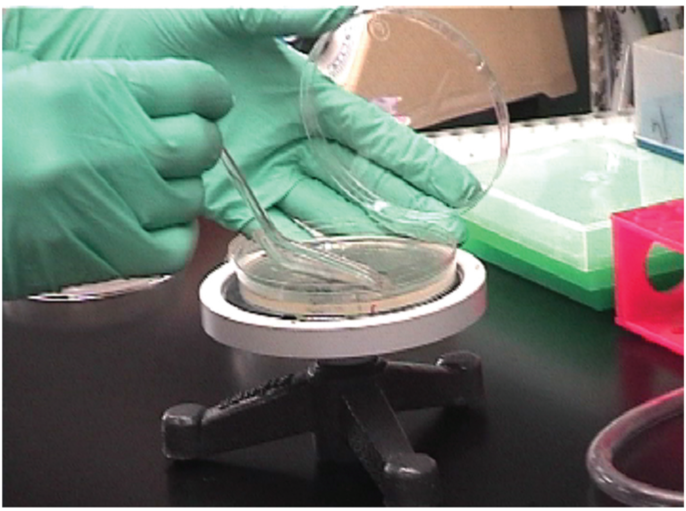

Figure 4. Mentor spreads bacteria by using the turntable

I also observed an apprentice performing the same technique; spreading with the turntable, and compared her movements to those of the mentor. The apprentice demonstrated by her hand movements that she had not yet reached a full understanding of the kind of light pressure she was required to apply, or how to move the spreader over the agar. Her movements were much more haphazard and much less focused on the plate than those of the mentor.

5.4 Representational gestures

One of the first things the new rotation student, upon entering apprenticeship, will learn is how to operate the many small and large instruments that are used in the lab on a daily basis. Ruth, who is an expert and a mentor, is teaching Hilary, the apprentice, how to operate the NanoDrop instrument in order to measure the DNA content in a drop of plasmid (small DNA molecules that can replicate independently), and determine if the sample contains enough DNA to be sequenced. The operation requires precision and patience, since a fair number of small steps all have to be followed accurately. The mentor's instruction is accompanied by hand gestures indicating measurements, movements, and content. In addition, in order to index various parts of the procedure, Ruth uses several different ways of pointing.

5.5 Gestures indicating invisible processes

Some processes within an instrument cannot be observed by the naked eye. Such an instrument is the NanoDrop machine. It measures micro-amounts of DNA in a sample of plasmid. The measuring process is hidden, but the visible results appear in figures on the attached computer screen. The mentor, who is familiar with the NanoDrop process, uses gestures to demonstrate what she knows is taking place within the machine.

This kind of collaboration between two researchers and an instrument in the production of knowledge is an example of the distributed cognition that is at work in highly technological work processes (Hutchins 1995; Goodwin 2000). The human researchers use different modalities to include the instrument in their interaction. Besides verbal description and instruction, Ruth adds gestures that emulate stages in the performance of the instrument. As an experienced user of the instrument in question, Ruth knows what happens when the drop of DNA is positioned on the NanoDrop pedestal and the device's arm is lowered to enclose it; she performs this operation with hand gestures to make Hilary better understand the procedure, thereby making the instrument into a 'co-actor' (Latour 1987). Ruth includes the technological apparatus in the participation framework (Goodwin 2007) by performing the activity of the instrument through her gestures. In this way, she contributes to Hilary's greater understanding of what is actually taking place within the instrument, even if the process is invisible.

5.6 NanoDrop

Ruth: =so, that makes sure that ((clapping her hands
together in one brisk movement)) you're actually
building a column of fluid= ((forming a circle with
her right hand, moving it up and down in the shape of a
column three times))
Hilary: Okay
Ruth: =until the top of the pedestal from the bottom
((measuring the distance from the top to
the bottom with her hands, moving them back and
forth horizontally anchoring the measurement))
click okay, it's gonna initialize, sounds like a
dentist drill, arghhh ((raising her shoulders in
disgust)) he he I hate the noise.

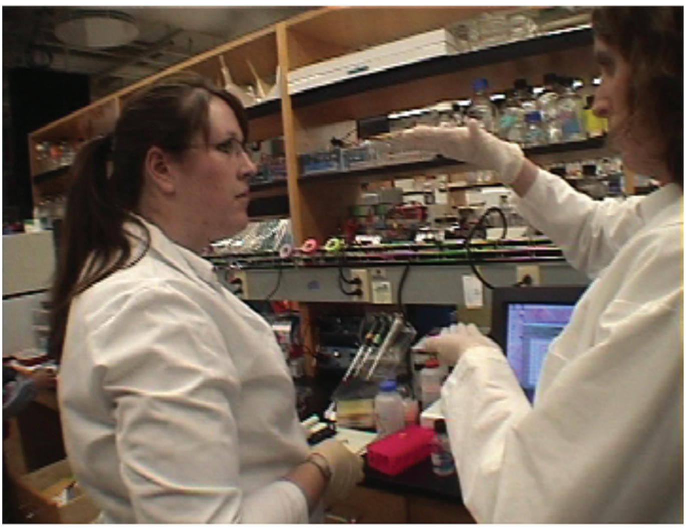

Figure 5. You're actually building a column of fluid

By using hand gestures, the mentor shows how a column of fluids is created between the upper and the lower pedestal on the instrument, thereby letting the upper fiber-optic cable connect with the lower, through the column of fluid. Her gestures embody information, both about the column's shape and verticality and about its relative size. This column of fluid is too small to be seen by the apprentice, but when the mentor performs the activity of the instrument through her gestures, the apprentice will get a better understanding of the process.

6. Conclusion

6.1 Adaptation to scientific practice

In these few examples from the daily routines in the microbiology lab in question, I have shown how apprentices adapt to skilled experimental work by developing techniques that involve embodied practices and sensitivities. In particular, in the case of spreading and plating techniques, specific hand and wrist movements are learned as early as during the first lab experiences; such movements tend to be stored in corporeal memory, thereby becoming tacit knowledge. In situations where experts train novices, such embodied skills and techniques are acquired by demonstration and imitation; verbal instruction is accompanied by the particular hand and body moves needed to perform a specific manual task. Gestures supplement and interact with language (typically when expert and novice are searching for words), and participants often improvise gestures to accompany verbal expressions (Goodwin 2003).

The knowledge acquired in this context of bodily information processing illustrates how the corporeal memory retains a sensibility for how to perform the task; hand gestures and finger movements demonstrate embodied adaptability for skilled manual work.

6.2 Integration of body and tools

In cases where researchers and instruments collaborate to perform operations, gestures serve to illustrate invisible activities taking place within a machine or instrument. In apprenticeship situations, experts train novices by using illustrative hand movements to explain complicated processes in simple and meaningful ways, thereby conveying information to the novice that is more difficult to express efficiently using words only.

The combination of language and embodiment in scientific practice is a complex integration of words and gestures, linking the body to the tool environment, and creating an interesting whole of semiotic modes. When knowledge is distributed between scientists, instruments, and objects, the human scientist uses gestures to include the nonhuman participants in the interaction, in order to illustrate the invisible activities of an instrument. Such embodied practices are critical to the training of the novice, and strengthen the learning process. When gestures represent objects or processes, these representations become actors in the apprentice's learning process. Through gestures and language, humans collaborate with, and adapt to, the tool environment, just as tools and instruments are adapted to the needs of the human participants. The framework that is created in this way extends the participation within the framework to include the nonhuman participants in more direct collaboration with humans than would be the case if one considered them as mere technical accessories.

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CHAPTER 14

Technological context

A new pragmatic product created by mobile devices

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This study investigated the impact of technological devices on Kuwaiti youths as creators of a technological context with its own pragmatic parameters. To the youth, a parallel communicative world is in action when they engage in any communicative repertoire using mobile devices. I conducted a survey at the Gulf University for Science and Technology in Kuwait to investigate the existence of such a contextual realm and whether it has its own regulatory factors. A majority of my respondents emphasized that when talking with any person using a mobile device, they are indeed engaged in a communicative environment, the context of which has its own regulatory parameters, such as emoticons, pictures, sound files, text files, tweets, and so on. A majority of the respondents insisted that they feel more secure when using their mobile devices, implying that they become different individuals when doing so, and that this sudden role change occurs due to the contextual environment in which they are engaged. This study emphasizes that the technological context is the product of instant collaboration between two or more communicators in a real-time situation. I argue that technological meanings are produced solely in a technological context and, thus, their facilitating environments differ from those found in the real world.

Keywords: technological devices, technological context, emoticons, tweets

1. Introduction

Due to the rapid social media use in today's world, people have become addicted to technological communication. Technological communication refers to a communicative environment provided by technological devices, such as WhatsApp, Twitter, and Facebook, and their use has revolutionized the way people communicate. Mobile phones, tablets, and personal devices in general have created a parallel world wherein interlocutors talk to each other in a unique way, which has

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affected the main tenets of traditional communication known to humanity. With this communicative revolution in mind, I concluded that when people interact with each other using technological devices, they are engaged in unique communicative repertoires that could not have existed without technological devices. Since the youth are among those most interested in the use of technology around the world, I investigated this unique human experience using a group of my own university's students. This study aimed to answer some important questions: do university students spend a considerable amount of time using their mobile devices? Do university students feel differently when communicating over mobile chats or WhatsApp chats? When using WhatsApp, are students engaged in a new context?

To answer these questions, I conducted a survey at the Gulf University for Science and Technology in Kuwait. I surveyed 155 students to determine whether the use of mobile devices created a new situational context. It is my hope that the present study paves the way for a better understanding of the nature of mobile chats, the special environment in which they are created, and the different kinds of pragmemes – situated speech acts – used to effectively negotiate contextualized meanings.

2. Background

Several theories, such as Searle's philosophic and linguistic treatment of speech acts (1969), Sadock's (2004: 18) linguistic account, Harnish's (2005: 21) formal account, and Tsohatzidis's (1994) analysis have narrowed and marginalized our approach to pragmatics and provided unrealistic explanations of pragmatic phenomena. Thomas, in her book *Meaning in Interaction*, completely rejects this narrow view, casting serious doubt on the validity of purely formal accounts of pragmatics (1995: 208). She correctly states that pragmatics is a probabilistic science and that context plays a crucial role in glossing meaning (Thomas 1995). Perhaps one of the most important pragmatic concepts, which has not been given sufficient attention, is the "pragmeme," as suggested by Jacob Mey (1993, 2001, 2011). This dynamic pragmatic concept provides a realistic understanding of what a real speech act is and how it functions in discourse. There is no proper understanding or analysis of situational context in linguistic studies as it is considered irrelevant in constituting linguistic structures. Mey (2010), Recanati (n.d.: 13), Sperber and Wilson (1986), and many other pragmatists have strongly refuted this belief (Al Sharoufi 2013). Mey holds the following opinion:

> Some American linguist once said: "The text is all we have." I would like to add that there is no text without context. With regard to speech acts, this idea is often encapsulated in the term "situated speech act," in order to capture the notion that speech acts, in themselves, are not "real": they have to be situated in reality, that is, in the context in which they were produced. This, by the way, is an insight already expressed by Austin as early as 1958 (Austin 1962). Not only are speech acts situated in a context but the context itself situates the speech acts, it creates them, as it were. A so-called indirect speech act is what the context makes it to be – not necessarily what the words spoken express by themselves; vice versa, a speech act (broadly: an utterance) may create the context for which it is appropriate. In international negotiations, for instance, the diplomatic speech acts are the instrument creating the final document, the communiqué or diploma, on which further negotiations are deemed to build; the felicity conditions for such acts cannot be captured by simplistic principles such as "sincerity" or by universal maxims such as "quantity" or "quality" (as already remarked by the British diplomat Harold Nicolson in 1919; Nicolson 1934: 208). Similarly, the Conversation Analysts are partly right in maintaining that conversation creates the structure in which it happens; but in addition, one should be mindful that conversations are also "situated," that is, their structuring happens in a general context of society. Here, "parts meet a greater whole": speech acts are always "situated," that is they are basically pragmatic acts.
> (Mey 2011: 178)

Mey succinctly shows that speech acts are powerful only when situated in their appropriate environments to fulfil the desired actions. It is, therefore, mandatory to understand the surrounding context of any speech act before considering the action it carries out in real life. This surrounding environment is embraced by the cultural repertoire that legitimizes and facilitates its production. In order to further construe the nature of this special environment, one has to understand the nature of the cultural enactments affecting the production of such an environment, which are called cultural schemata.

3. Methodology

This study investigates the impact of technological devices on Kuwaiti youth as creators of a technological context with its own pragmatic parameters. One often finds young people engaged with their mobile devices to the extent of total detachment from the outside world. To them, a parallel communicative world is in action when they engage in any communicative repertoire using a mobile device. I conducted a survey at the Gulf University for Science and Technology in Kuwait to investigate the existence of such a contextual realm and whether it has its own regulatory factors. The survey was answered by 155 respondents, all of whom were sophomore and junior students at the university.

A majority of the respondents emphasized that when talking with someone using a mobile device, they were indeed engaged in a communicative environment whose context has its own regulatory parameters, such as emoticons, pictures, sound files, text files, tweets, and so on. All such contextual elements play a crucial role in determining meaning in this real-time conversation. Thus, it can be said that mobile devices create a technological context wherein numerous semiotic elements, especially communicative pragmemes, simultaneously produce technological meanings restricted to technological devices. This study highlights that technological context is the product of instant collaboration between two or more communicators in a real-time situation. I argue that technological meanings are produced solely in a technological context, and, thus, their facilitating environments are different from those found in the real world.

4. Survey overview

The survey consisted of a number of questions, based on each student's year in the university and the type of devices used. The results I obtained from the survey are summarized in the present section.

The 155 people included in the study were categorized into groups according to device type and university year. In the device type category, the first group was desktops and laptops (27%, 42 people), and the second group was smartphones and tablets (73%, 113 people). The results are broken down as follows:

74.2% of students in the second category and half the students in the first category spend over four hours on their devices daily ($p = 0.0060$).
Most students in the second category use WhatsApp (50%), while those in the first category mainly use Twitter (32.5%) ($p = 0.0031$).
45.4% of students in the second category and 40% ($p = 0.5653$) in the first category become deeply involved in their chats.
76.9% of students in the first category and less than half the students in the second category (41.2%) indicated that they use "A few" emoticons in chats ($p = 0.0002$).
70% of students in the first category and 49.5% of students in the second category do not use sound files in chats ($p = 0.0280$).
Most students (82.5% of the second category and 64.9% of the second category) do not use video clips in their chats ($p = 0.0414$).
Almost all the students who use smartphones post pictures in their chats (98%), while only 57.5% of those who use desktops do ($p = 0.0001$).

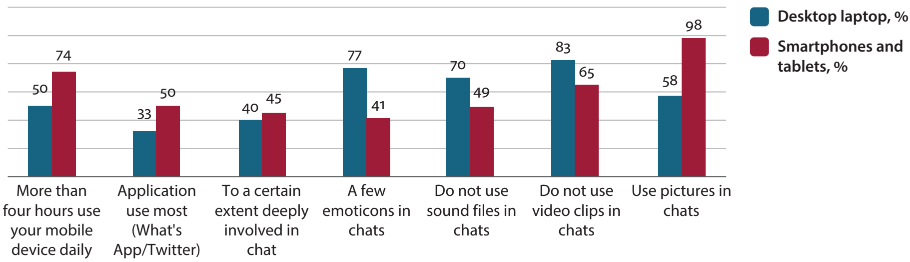


Figure 1. A graphical representation of the responses to the first seven questions

A majority of the students do not feel that they become a different person when texting (63.5% of the first category and 90% of the second category) ($p = 0.0019$).

66% of students in the second category feel more secure when texting on their mobile devices, while 60% of those in the second category do not ($p = 0.5068$).

46.4% of students in the second category and 27.5% of students in the second category think that there is a significant difference between their face-to-face chats and their chats using social media ($p = 0.0408$).

A majority of students in the second category think that they are engaged in a different context when texting (59.8%); contrarily, a majority of the students who use desktops (55%) do not think so ($p = 0.0174$).

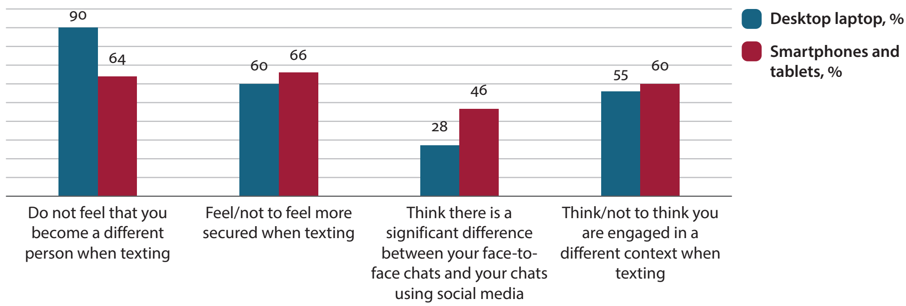


Figure 2. A graphical representation of the responses to the next four questions

In the second category, based on university year, there were two groups. The first group comprised second-year students (50%, 77 people), and the second comprised third-year students (50%, 78 people). The results are broken down as follows:

Second- and third-year students both use mobile devices for over four hours a day (80.8% and 52.4%, respectively) ($p = 0.0004$).

A majority of second- and third-year students use WhatsApp (50% and 31.7%, respectively) ($p = 0.0307$).
Many second- and third-year students indicate that they are deeply involved in WhatsApp chatting "To a certain extent" (50% and 36.5%, respectively) ($p = 0.1127$).
Second-year students use emoticons in their chats more intensively (51.4% answered "Lots of them") than third-year students (14.3% answered "Lots of them") ($p = 0.0095$).
Most second-year students use files in their chats (62.2%), while third-year students do not (77.4%) ($p = 0.0551$).
Most second- and third-year students do not use video clips in their chats (62.2% and 79.4%, respectively) ($p = 0.0284$).
Most second- and third-year students use pictures in their chats (91.9% and 79.4%, respectively) ($p = 0.0345$).

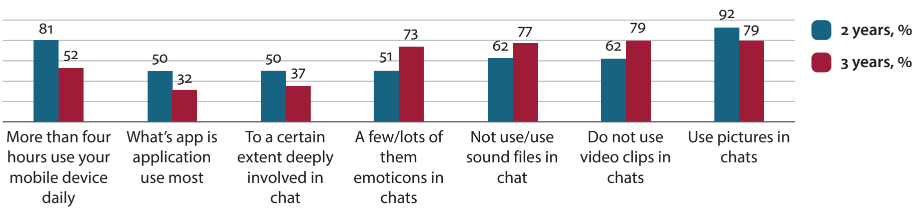


Figure 3. A graphical representation of the responses to the first seven questions

Over half of both second- and third-year students do not feel that they become a different person when texting (54.8% and 90.5%, respectively) ($p = 0.0001$).
Most second- and third-year students (63.5% and 52.4%, respectively) answered "Yes" to the question, "Do you feel more secure when texting?" ($p = 0.1877$). This question was aimed at evaluating the respondents' answers to the previous question. A high percentage of "Yes" answers to this question show that respondents feel more secure when chatting using WhatsApp, implying that they do take on different personas. Thus, the high percentage of positive answers to this question nullifies the high percentage of negative answers to the previous question.
47.3% of second- and 28.6% of third-year students "Absolutely" think that there is a significant difference between their face-to-face chats and their chats using social media ($p = 0.0249$).
Most second- and third-year students think that they are engaged in a different context when texting (55.4% and 50.8%, respectively) ($p = 0.5897$). This major finding supports my hypotheses at the beginning of this study.

A more detailed statistical account of my survey can be found in the Appendices.

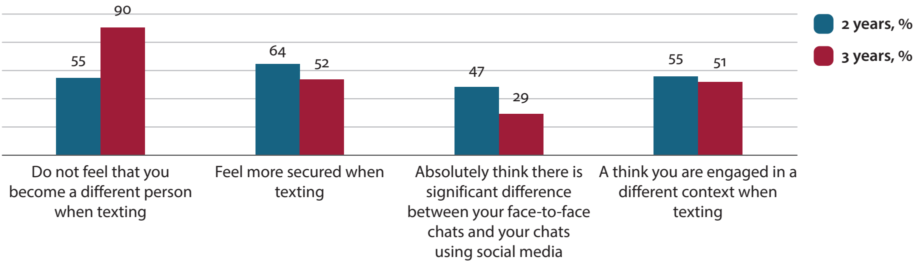
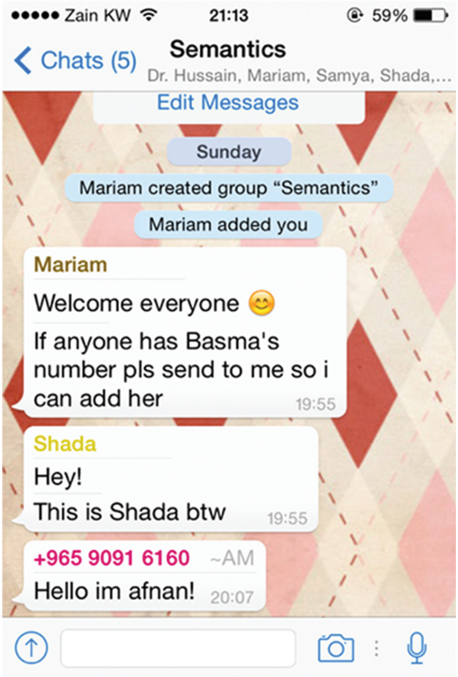


Figure 4. A graphical representation of the responses to the four questions

5. Analyzing students' WhatsApp chats

Following the responses to the survey, I analyzed some of my students' WhatsApp chats.



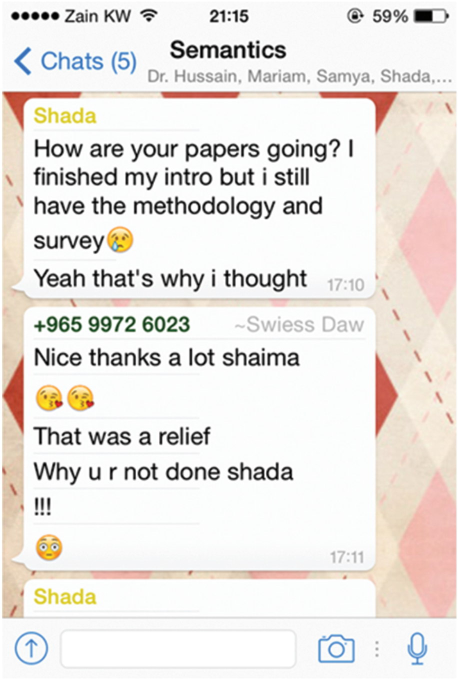
https://www.youtube.com/watch?v=YQHsXMglC9A

The student used Adele's clip to indicate that she is welcoming her colleagues and, at the same time, to convey that she, like Adele, is sad because of the course requirements. This video clip adds weight to the meaning conveyed, stressing Sharifian's point (2010) that any linguistic structure is the product of a cultural scheme. Students feel relaxed when expressing themselves in WhatsApp chats. They abbreviate, codeswitch, and "Arabicize" English whenever they want. Figure 5 shows how they introduce themselves to each other, and Figure 6 depicts a strange encounter wherein the student introduces herself in English, then greets her colleagues in Arabic using Latin letters:

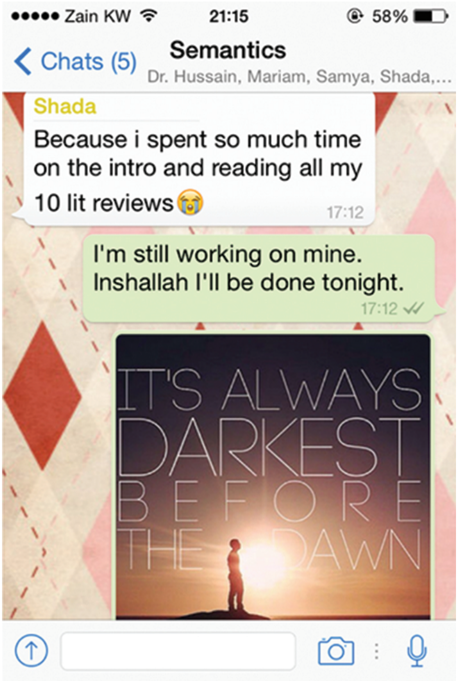
Elslam 3aleekoom (Peace be upon you!) – in standard Arabic, compared to *Ana yeet* (I have just arrived) – in vernacular Kuwaiti Arabic. In Figure 6, Sara al-Dawood uses an emoticon illustrating her supposedly unexpected arrival; she expects her colleagues to exchange the same good feelings with her. She greets her colleagues using an Islamic greeting, then starts a conversation with them.

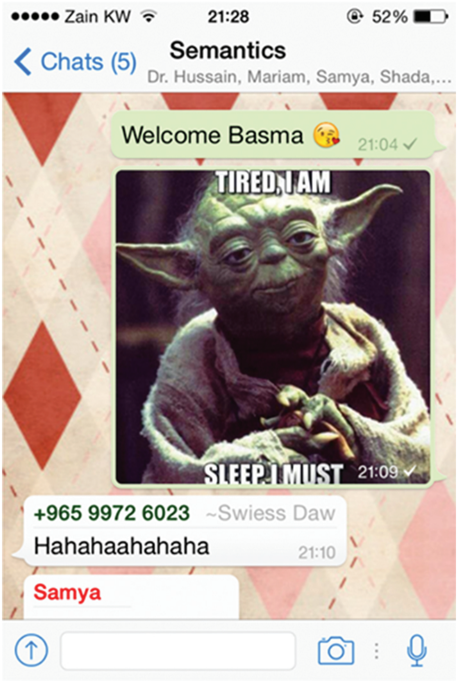
Mariam replies, "*Hala hala w 3laikum elsalam*" (Welcome, peace be upon you too). She abbreviates the Arabic form to make it a shorter and more communicative form of the greeting pragmeme. (The full form is *wa alaikum assalam wa rahmatullahi wa barakatuh*).

In WhatsApp chats, users primarily rely on instantiating a specific context. The meanings they produce are instantiated by virtue of the context they actively create in the real-time chat. Through the use of emoticons, sound clips, memes, and so on, WhatsApp users are able to carefully anticipate what happens next, formulating the next step based on what is actively being negotiated (Thomas 1995). Formulating a chat using WhatsApp thus allows users to know exactly what they want to achieve before formulating what they write. This outside-in view of meaning (Mey 2011) explains why WhatsApp users pay heed to their pragmatic acts, rather than solely formulating their sentences. On WhatsApp, pragmemic negotiations take place in a real-time fashion.



A new colleague, Shaima, enters the chat by greeting all the members and introducing herself. She is welcomed warmly (kissing face) by Sara and greeted by Shada. Shaima starts her turn by answering one of her colleagues' queries on what to submit and when. Shada, feeling overburdened by her paper requirements, asks Shaima whether she is done with her own paper. Shaima replies that she is still working on her paper and inserts a meme to sympathize with Shada's difficult mission. This way, multisemioticity is intertwined with codeswitching, offering a unique opportunity for the emergence of a technological context. These students mix a number of linguistic codes simultaneously when chatting in WhatsApp, each semiotic element functioning as a semiotic signal, thus building a unique mosaic of communicative repertoire. Multisemiotic modes foster a new type of textuality that requires a special type of context, one that facilitates communicators by providing a special environment wherein they can express themselves confidently and assertively. WhatsApp users strive "to model, experiment, manipulate, juxtapose, interconnect, and synthesize the dimensions of experience" (O'Halloran 2010: 14).


●●●●● Zain KW
21:15
58%
Chats (5)
Semantics
Dr. Hussain, Mariam, Samya, Shada,...
Shada
Because i spent so much time on the intro and reading all my 10 lit reviews
17:12
I'm still working on mine. Inshallah I'll be done tonight.
17:12
IT'S ALWAYS DARKEST BEFORE THE DAWN


●●●●● Zain KW
21:28
52%
Chats (5)
Semantics
Dr. Hussain, Mariam, Samya, Shada,...
Welcome Basma
21:04
TIRED, I AM
SLEEP I MUST
21:09
+965 9972 6023 ~Swiess Daw
Hahahaahahaha
21:10
Samya

In WhatsApp chats, users tend to intuit what they are going to say by reflecting on what the other communicators use as behavioral tokens. According to Van Dijk, "contexts are thus not some kind of objective condition or direct cause, but rather (inter)subjective constructs designed and ongoingly updated in interaction by participants as members of groups and communities … contexts are participant constructs. This is also the reason why the main hypothesis of the theory of context is a socio-cognitive one". (2007: 10)

In mobile chats, participants define their conversational situations and determine the required elements for their interactive chatting, where every participant uses a multitude of emoticons, pictures, memes, and voice recordings to create a unique context. Adding to this unique flavor of mobile chatting, these Arab students not only use English words in their chats, but also Arabicize some English words to create a friendly atmosphere in which every participant is expected to chat using any available contextual tool.

Students use an abundance of multimodal elements when chatting with WhatsApp. Using multimodal elements helps create a unique situational context that emerges as students interact with each other in their conversational repertoires. Students use polite turn-taking strategies, showing goodwill in welcoming and praising each other. Such strategies help them achieve their pragmatic goals effectively. Using praise, such as emphasis on good bearing as an effective step toward a successful request, a pragmeme is generated by observing the instantaneous context. The use of turn-taking strategies triggers participants' compliance with the intended request. To create a requesting speech act, for instance, some students use the following formula: Arabic compliment + description of current task to illustrate request + crying face. Using this formula, the user succeeds in eliciting an answer to the request as a collaborative reply. Similar formulae help users to use pragmemes effectively in their pertinent instantaneous context.

Another strategy used by students is that of using so-called memes, which include pictures and text. They use memes as an act of solidarity to alleviate anxious feelings. This multi-semiotic combination of messages further enhances the users' communicative effectiveness. Through memes, students use numerous juxtapositions to convey effective messages, illustrating their anxieties. This unique technological context is born when users engage in a chat using a mobile device. By using a multitude of technological elements when communicating with others, the users of mobile devices thus benefit from several technological resources enabling them to communicate effectively.

6. Discussion

Addressing the situatedness of pragmemes introduces a more all-encompassing arena, providing legitimacy and effectiveness for choosing specific pragmemes to fulfill certain communicative goals. This new arena affects, to a large extent, the way people communicate and achieve their communicative goals. According to Sharifian (2010: 91), language is the enactment of certain cultural conceptualizations that stem from larger cultural schemata. Such cultural schemata explain the macrostructures of social knowledge, which in turn affect language and the way it is used in social contexts.

Cultural schemata resemble an umbrella of superordinate clouds of social codes that regulate human behavior at a discursive level. As micro-products of these higher cultural schemata, discourses set a social order for classifying and normalizing societal relationships. "Discourse is the vessel that carries power/knowledge. Discourse strategies are the means by which relations of power/knowledge are created, maintained, resisted and transformed" (Motion & Leitch 2007: 9). Such relations of social power determine interpersonal communication to a large extent and make it subservient to the factors of higher status, dictated by social agents of the highest order. Michel Foucault has argued that "each society has its regime of truth, its 'general politics' of truth: that is, the types of discourse that it accepts and makes function as true" (Foucault 1980: 131).

Speech acts have dominated pragmatic literature studies for years. Numerous linguists and philosophers have considered speech acts as special, powerful verbal units, capable of carrying out actions on their own. Mey, however, has strongly refuted this spurious claim; speaking of reference, he states that "we cannot refer in and by ourselves alone: reference is only satisfactory and complete when a common interpretation for all referred items has been established. In other words, referentiality presupposes a collaborative effort, and by that token, it is a true pragmatic act" (2010: 2887). The use of referential discursive strategies relies heavily on the context of the situation, given that anything used in language to refer to a particular entity or person is contextually bound. Capone further elaborates Mey's vision of pragmatic acts, stating that "a pragmeme is a situated speech acts in which the rules of language and of society combine in determining meaning" (2005: 13–55). This stance, which situates pragmemes at the intersection of language and society, qualifies them as micro-products that are controlled schematically and discursively.

Going back to the greeting pragmeme, I used Sharifian's framework to analyze some of my students' phrases above as follows:

Ana yeet (I have just arrived) – vernacular Kuwaiti Arabic. Here Sara used an emoticon, illustrating her supposedly unexpected arrival; she expects her colleagues to exchange the same good feelings with her.

Sara al-Dawood greeted her colleagues using an Islamic greeting, then started a conversation with them. Her greeting is manifested through the 'pract' (Mey 2001: 220) announcing her arrival, as depicted in Table 1.

Table 1.

Cultural Pragmatic Schema: Solidarity through participation
Speech act/event: "Announcing presence to all participants"
Pragmeme: Announcing indirectly that her presence will enhance the current chat, hence she has a lot to add
Pract: " Ana yeet"

Shada, Sara's colleague, replied, "Wnn3m fekum" (a short form for *Wa nne'em bikum*). Shada used a polite turn-taking strategy, showing goodwill in welcoming her colleagues and praising their good bearing – a socio-cultural practice in Kuwaiti society. By emphasizing social stature, Shada showed respect to her colleagues. She then shifted the topic to what she is up to now – an indirect pragmemic invitation for her colleagues to help her find resources for her topic. She used a crying emoji, illustrating her ordeal in finding relevant resources on her topic and her need for her colleagues' help. Table 2 shows Shada's effective strategy of using pragmemes.

Table 2.

Cultural Pragmatic Schema: Praising politely as an act of solidarity
Speech act/event: "Praising"
Pragmeme: Praise your audience in a polite manner
Pract: "Wnn3m fekum"

In a third instance of the same chat, Shada posed the following question:

> "Are you studying for applied?"

This question is syntactically incorrect and semantically indeterminate. However, it is an (allo)pract under the question pragmeme, determined by the fact that Sada, by using such an elliptical structure, makes Samya understand that Shada is referring to 'applied linguistics'; nothing else is 'applied' in this context. This communicative collaboration would not have been possible without negotiating pragmemes the way Mey postulates. Multimodality affects the formation of personal identity through an ongoing conversation (Boyd & Heer 2006), reflecting an idiosyncratic identity over time that emerges only when using a social media applications such as WhatsApp.

Table 3 shows Shada's strategy in using the interrogative pragmeme.

Table 3.

Cultural Pragmatic Schema: Asking for help to buttress solidarity
Speech act/event: "Asking"
Pragmeme: Ask for help to buttress solidarity
Pract: "Are you studying for applied?"

7. Conclusion

The parameters constituting a technological context differ drastically from those that determine face-to-face conversations. Video clips, sound files, emoticons, pictures, and memes are elements that are available solely on technological devices. This new technological context has paved the way for the emergence of new structures and meanings. The pragmatic effect of a text becomes highly injected with elements that are unavailable in a natural context.

The present study marks the beginning of a methodological investigation of WhatsApp chats, by illustrating how important it is to understand the communicative system used to convey meaningful messages. Interlocutors using WhatsApp chats are engaged in a completely new communicative environment wherein a new situational context is created.

The answers to the main questions posed at the beginning of the present study are as follows: Young university students indeed spend long hours using their mobile phones; the students feel differently when chatting on WhatsApp; and: a new situational context is born in a WhatsApp chat. With the advent of the technological context, it has become necessary to start investigating this new communicative phenomenon and the unique meanings it produces. We are indeed facing a new era of communication, which brings with it the need for new methods, tools, and insights.

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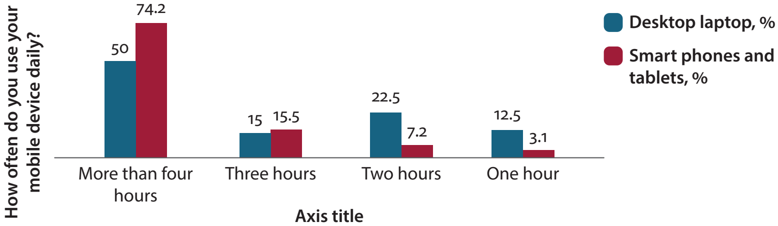
Appendices

This study investigated the impact of technological devices on Kuwaiti youths' lives in co-creating a technological context with its own pragmatic parameters. The study included 155 participants, who were categorized into two groups based on device type and university year.

The study included 155 people, categorized into two groups: device type and university year. In the device type category, the first group was desktops and laptops (27%, 42 people), and the second group was smartphones and tablets (73%, 113 people). Below are the questions formulated for each of the different categories (Q1–Q15 Device, respectively Q1–Q15 University Year)

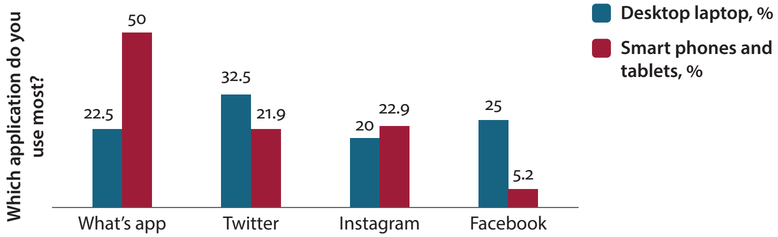
Device type category

Q1: How often do you use your mobile device daily?



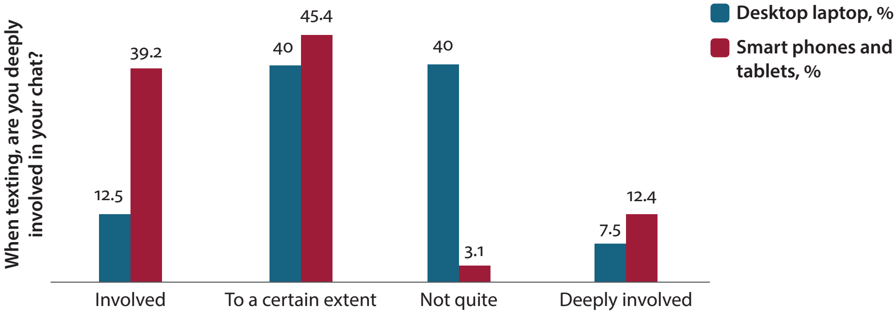
We can see that students in the second category use their mobile devices more often (74.2% use devices for over 4 hours) than those in the first category (50%) (Chi-Square, $p = 0.00603$).

Q2: Which application do you use most?



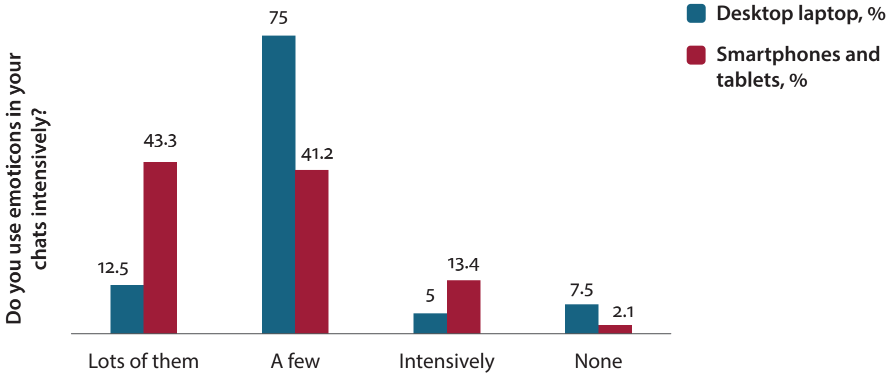
The majority of students in the second category use WhatsApp (50%) most often, while those in the first category use Facebook (25%) (Chi-Square, $p = 0.00089$).

Q3: When texting, are you deeply involved in your chat?



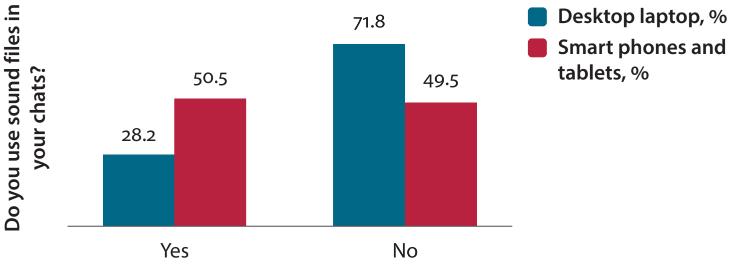
Most students who become deeply involved in chats belong to the second category (39.2%) compared to those in the first category (12.5%) (Chi-Square, $p = 0.00000$).

Q4: Do you use emoticons in your chats intensively?



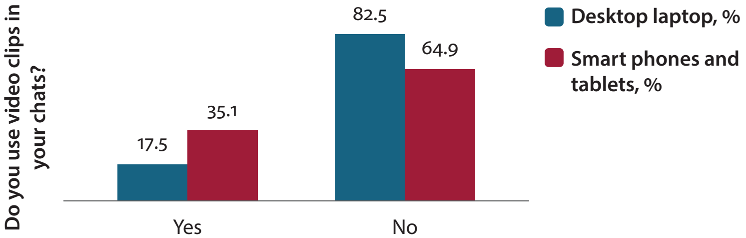
The graph shows that students in the second category use emoticons in their chats more intensively (43.3% answered "Lots of them") than those in the first category (12.5%) (Chi-Square, $p = 0.00039$).

Q5: Do you use sound files in your chats?



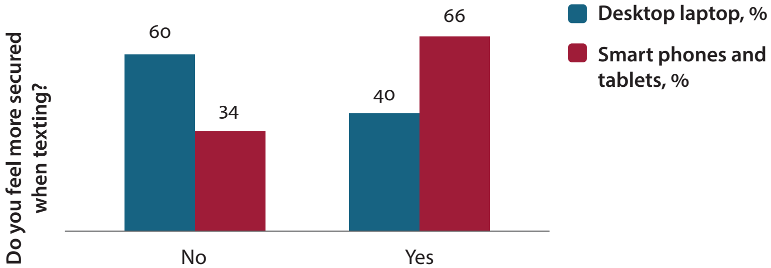
More students in the second category answered positively to this question (50.5%) than students in the first category (28.2%) (Chi-Square, $p = 0.01780$).

Q6: Do you use video clips in your chats?



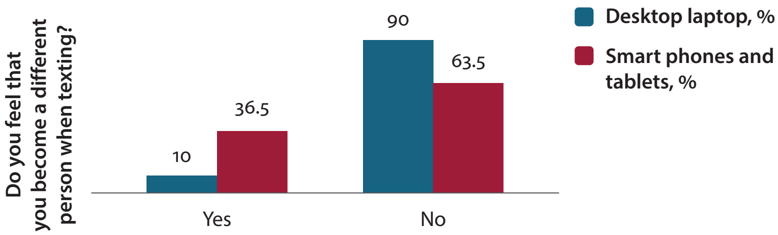
Most students do not use video clips in their chats; 82.5% of students in the second category and 64.9% of students in the first category answered "No" (Chi-Square, $p = 0.04138$).

Q7: Do you use pictures in your chats?



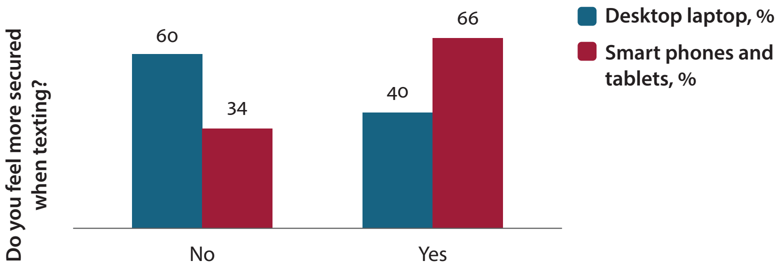
Most students in the second category use pictures in their chats 66%, while most students in the first category do not (60%) (Chi-Square, $p = 0.00000$).

Q8: Do you feel that you become a different person when texting?



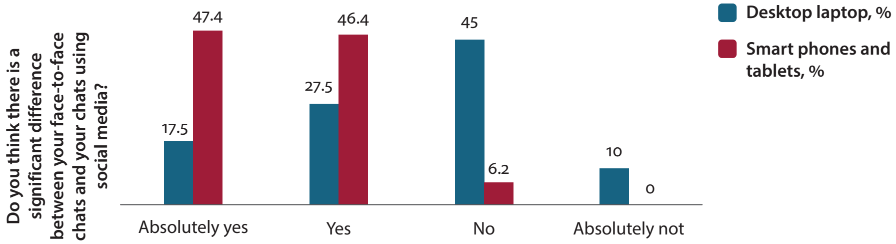
Most students do not feel that they become a different person when texting (students in the second category: 63.5%; students in the first category: 90%) (Chi-Square, $p = 0.00188$).

Q9: Do you feel more secure when texting?



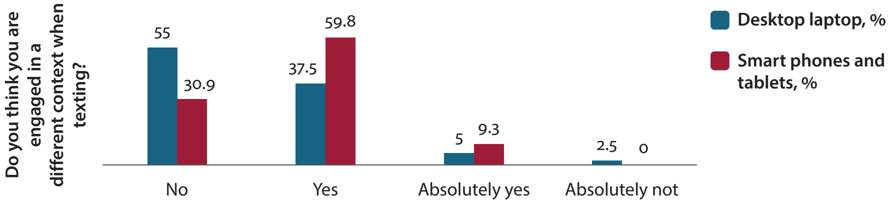
Here we can see that students in the second category feel more secure when texting (66% answered "Yes") than students in the first category (40% answered "Yes") (Chi-Square, $p = 0.00503$).

Q10: Do you think there is a significant difference between your face-to-face chats and your chats using social media?



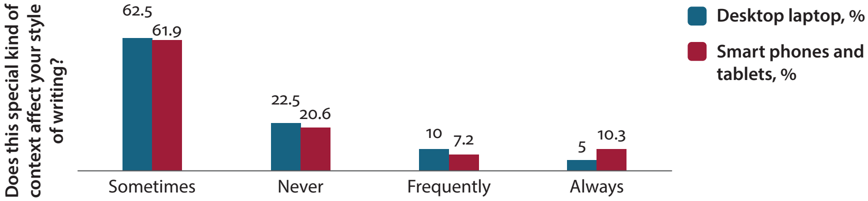
As seen in the chart, students in the second category feel more strongly that there is a significant difference between face-to-face chats and chats using social media (47.4% answered "Absolutely yes") than those in the first category (17.5% answered "Absolutely yes") (Chi-Square, $p = 0.00000$).

Q11: Do you think you are engaged in a different context when texting?



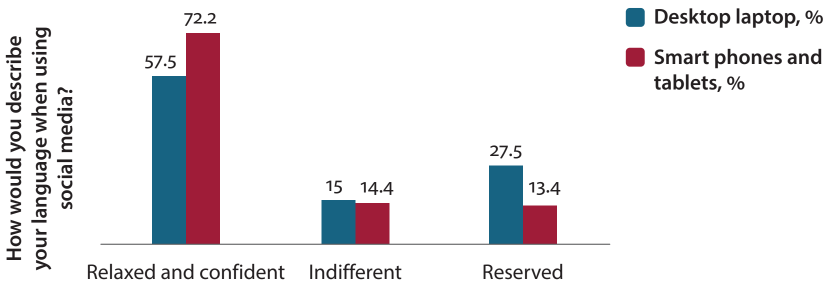
Most students in the second category do think they are engaged in a different context when texting (59.8%); contrarily, most students in the first category (55%) do not think so (Chi-Square, $p = 0.01826$).

Q12: Does this special kind of context affect your style of writing?



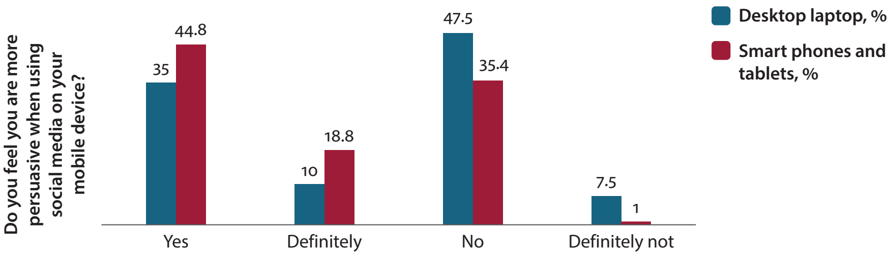
Students in both categories think that the special context "Sometimes" affects their style of writing (61.9% and 62.5% of the second and first categories, respectively) (Chi-Square, $p = 0.74487$).

Q13: How would you describe your language when using social media?



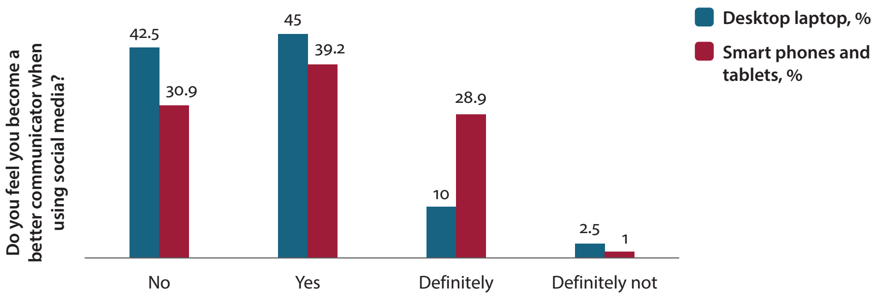
The graph shows that most students, in both categories, think they use "Relaxed and confident" language when using social media (72.2% and 57.5%, of the second and first categories respectively) (Chi-Square, $p = 0.12767$).

Q14: Do you feel you are more persuasive when using social media on your mobile device?



Students in the second category (44.8%) feel that they are more persuasive when using social media on their mobile device. Only 35% of the students in the first category feel that they are more persuasive when using social media on their mobile devices (Chi-Square, $p = 0.07050$).

Q15: Do you feel you become a better communicator when using social media?

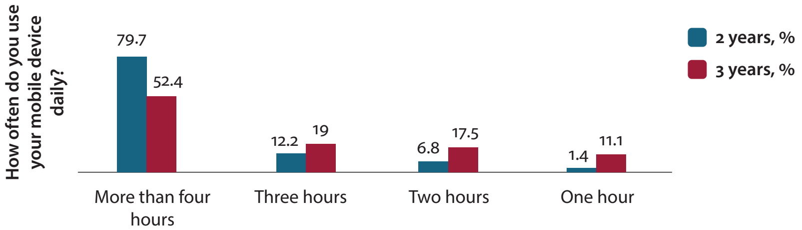


The majority of students in both categories (39.2%and 45% of the second and first categories, respectively) answered "Yes" to this question (Chi-Square, $p = 0.10802$).

University year category

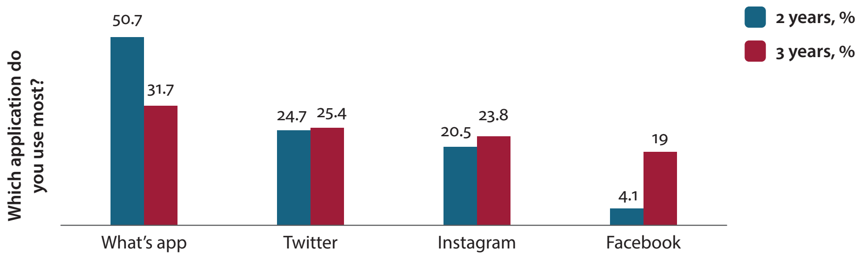
The second category, university year, included the second- (50%, 77 people) and third-year students (50%, 78 people). A survey was conducted wherein the participants answered a number of questions only once, as follows:

Q1: How often do you use your mobile device daily?



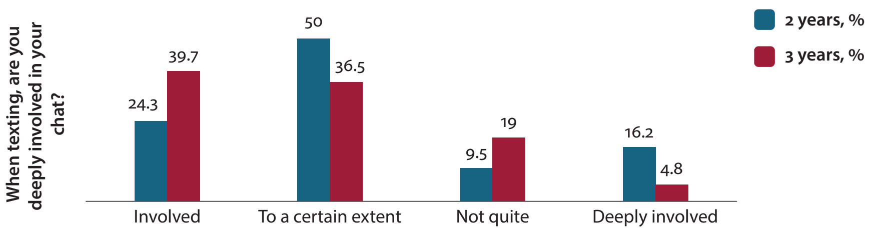
Here we can see that more second-year students use mobile devices often (79.7% responded "More than 4 hours") than third-year students (52.4%) (Chi-Square, $p = 0.00329$).

Q2: Which application do you use most?



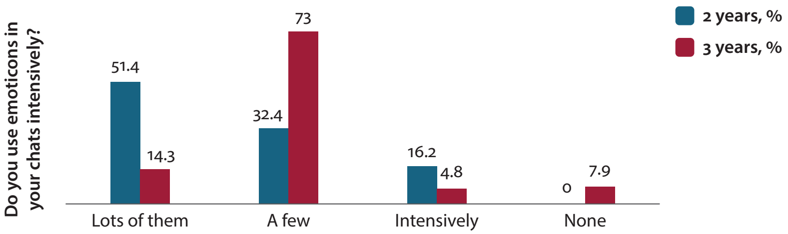
A majority of both second- and third-year students use the WhatsApp application most (50% and 31.7%, respectively) (Chi-Square, $p = 0.01938$).

Q3: When texting, are you deeply involved in your chat?



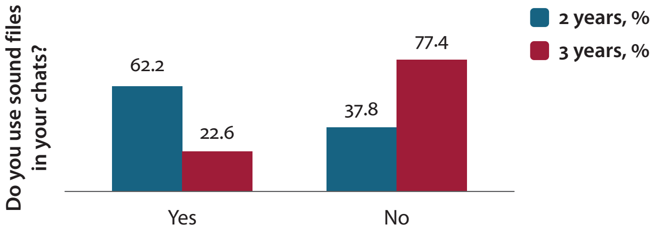
More second-year (50%) than third-year students (36.5%) indicated that they become deeply involved in their chats "to a certain extent" (Chi-Square, $p = 0.01614$).

Q4: Do you use emoticons in your chats intensively?



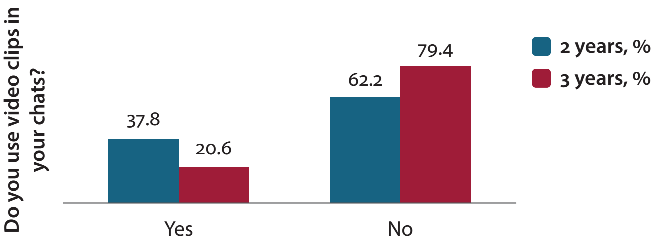
The graph shows that second-year students use emoticons in their chats more intensively (51.4% answered "Lots of them") than third-year students (14.3% answered "Lots of them") (Chi-Square, $p = 0.00000$).

Q5: Do you use sound files in your chats?



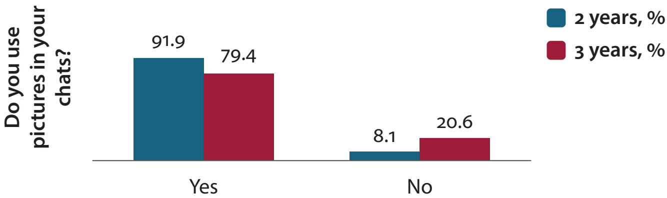
Most second-year students use sound files in their chats (62.2% answered "Yes"), while most third-year students do not use (77.4% answered "No") (Chi-Square, $p = 0.00000$).

Q6: Do you use video clips in your chats?



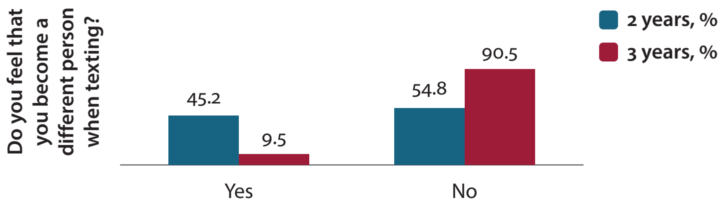
A majority of both second- and third-year students do not use video clips in their chats (62.2% and 79.4%, respectively) (Chi-Square, $p = 0.02842$).

Q7: Do you use pictures in your chats?



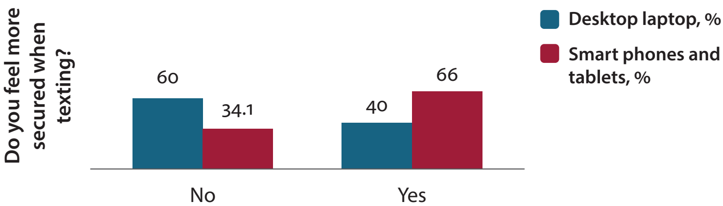
Here we can see that a majority of both second- and third-year students do use pictures in their chats (91.9% and 79.4%, respectively) (Chi-Square, $p = 0.03449$).

Q8: Do you feel that you become a different person when texting?



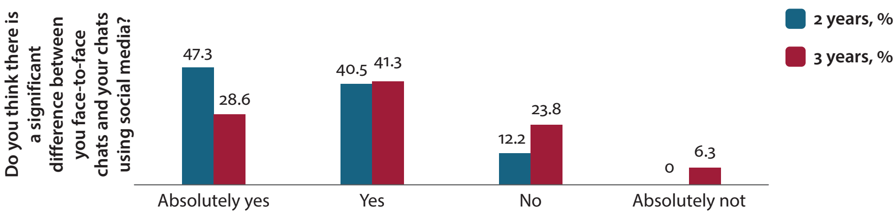
More than half of both second- and third-year students do not feel that they become a different person when texting (54.8% and 90.5%, respectively) (Chi-Square, $p = 0.00000$).

Q9: Do you feel more secure when texting?



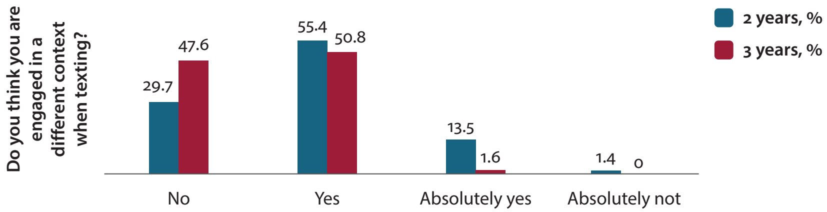
Students who use smartphones or tables feel more secure when texting (66% responded "Yes") than those who use desktops (40%) (Chi-Square, $p = 0{,}00503$).

Q10: Do you think there is a significant difference between your face-to-face chats and your chats using social media?



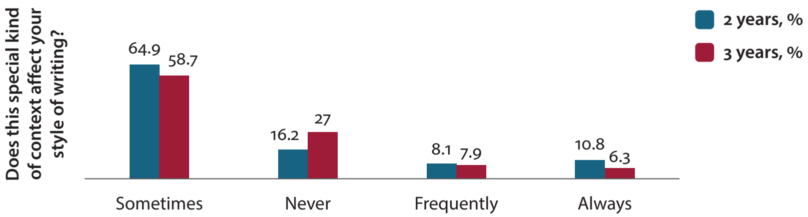
As seen in the chart, second-year students feel more strongly that there is a significant difference between face-to-face chats and chats using social media (47.3% answered "Absolutely yes") than third-year students (28.6%) (Chi-Square, $p = 0.01530$).

Q11: Do you think you are engaged in a different context when texting?



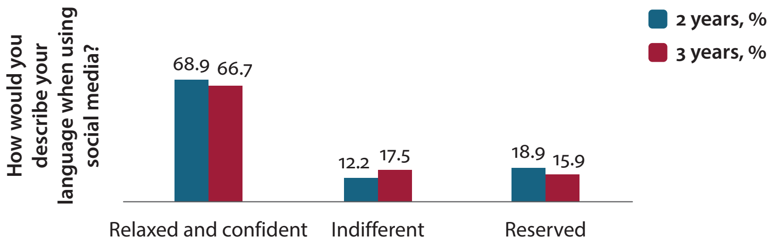
A majority of second- and third-year students think they are engaged in a different context when texting (55.4% and 50.8%, respectively) (Chi-Square, $p = 0.01957$).

Q12: Does this special kind of context affect your style of writing?



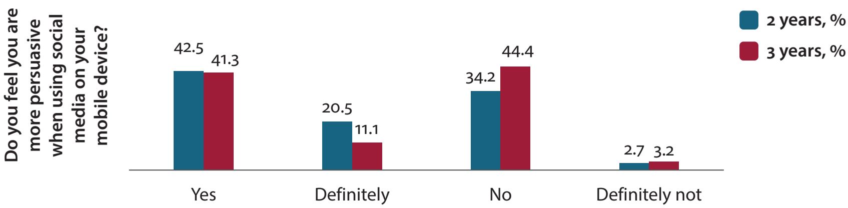
Most second- and third-year students think that this special context affects their style of writing "Sometimes" (64.9% and 58.7%, respectively) (Chi-Square, $p = 0.41615$).

Q13: How would you describe your language when using social media?



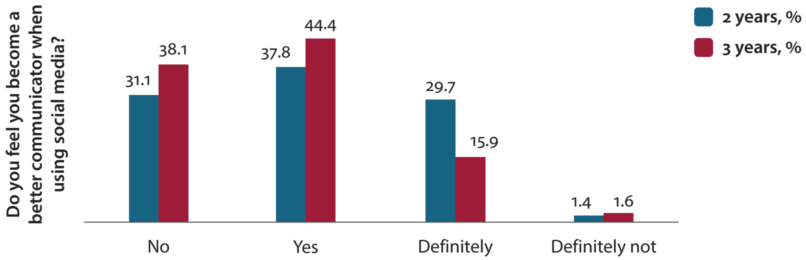
More than half of second- and third-year students think they use "Relaxed and confident" language when using social media (68.9% and 66.7%, respectively) (Chi-Square, $p = 0.65052$).

Q14: Do you feel you are more persuasive when using social media on your mobile device?



As seen in the chart, a majority of second-year students feel that they are more persuasive when using social media on their mobile device (42.5% answered "Yes"), while a majority of third-year students do not (44.4% answered "No") (Chi-Square, $p = 0.42394$).

Q15: Do you feel that you become a better communicator when using social media?



Here we can see that the majority of second- (37.8%) and third-year (44.4%) students selected "Yes," indicating that they feel they become better communicators when using social media (Chi-Square, $p = 0.30039$).

CHAPTER 15

Language policy and language teaching

Conditions of adaptability

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Universidade Estadual de Ponta Grossa

This study focuses on the teaching of English in Brazil and how language policy is handled by public school teachers; it also offers some reflections on adaptability (Mey 2009). Given the current status of English as a *lingua franca*, the study seeks to understand its influence in the classroom, both in relation to the official regulation of such practice and to the individual choices made by teachers. The project contained a proposal for action research with a group of teachers in the state school system in Ponta Grossa, Paraná, Brazil. The research was developed through meetings in the Text Studies Laboratory at the State University of Ponta Grossa every fortnight. The teaching material was analyzed in discussions with the teachers, and by using their diaries, based on the lessons taught. The results identified the participants' difficulties to see language as a social practice and their struggle to translate the documents into their daily practice. Additionally, teacher-centered practices focusing on the structural aspects of the language, with the concomitant difficulties of joining practice to theory, were observed. The emphasis on adaptability in the process of teaching language through the medium of diverse social practices seems to be a challenge still to be worked out in the context of teaching English as a foreign language in Brazil.

Keywords: language policy, language teaching, social practice, public schools, adaptability

https://doi.org/10.1075/pbns.319.15car

1. Introduction

This chapter proposes some reflection upon Language Policy and adaptability issues in the teaching context, taking into consideration both the teachers' initial education and their practice. Such concerns have been of great importance in the discussions held in the Text Studies Laboratory – LET[1] at the State University of Ponta Grossa, Paraná, Brazil, mainly whenever language teaching was their subject.

Language Policy has been seen as a tool to deal with multilingualism in historical and social contexts. Calvet (2007: 69–71) makes a distinction between *in vivo* and *in vitro* policies. The former originate from social interactions in which communication events occur and address, for example, the fact that different languages or varieties of the same language are used in a certain speech community, or the difficulties that arise for someone who needs to master a foreign language which is required (in the workplace or for academic purposes). The latter policies result from interventions by the State as the creator of laws and regulations for the use of a certain language.

Current events of communication have to be dealt with in the contexts of globalization and new technologies, something which makes events of communication between speakers of different languages much more frequent than used to be the case in the past. In particular, with regard to English, both teachers and students may have more contact with the language outside of the classroom than during the lessons, thereby being provided with a rich experience with the *in vivo* approach in everyday interaction, in terms of what they have to do to understand, or make themselves understood, whenever they are exposed to a foreign language.

Concerning the *in vitro* policy, language planning is embodied in the official documents that regulate language teaching in Brazil (as represented by the Diretrizes Curriculares da Educação Básica – LE Moderna/Paraná – DCE

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1. The "Text Studies Laboratory" (LET, by its Brazilian acronym) is an Extension Program approved by the State University of Ponta Grossa (UEPG) through Resolution CEPE N.º217, of 13/12/2007, whose aim is to develop projects within the areas related to text studies. In the laboratory, participants carry out such activities as reading, writing and text analysis of the most diverse genres. The laboratory also offers space for courses, research projects, teaching (basically clusters of study involving undergraduate students in introductory courses dealing with the Language Course research topics); projects related to teacher qualification; reading and writing activities seeking to meet the interest of the social groups to whom these activities are relevant. This program is based on dialogue and extended study, along with methodological procedures that involve teaching and research related activities, relying on the infrastructure necessary to develop the several activities proposed. Thus, the work developed at LET is usually linked to the Language Course Curriculum, in order to enhance education of teachers and researchers interested in discussing the social role of higher education; it aims at broadening and improving these activities.

(2008)[2] and the Orientações Curriculares para o ensino de LE no Brasil – OCEM (2006);[3] these documents are supposed to present the official policy regarding the importance and objectives of teaching a foreign language at the classroom level.

Taking into consideration the constant development that is inherent in issues of language and education, the distinction between 'adaptability' and 'adaptivity', as proposed by Mey (2009), seems to be relevant here. In Mey's words, "the latter [adaptivity] is defined as a unilateral coercion on the human to conform to the patterns of behavior imposed […], the former [adaptability] captures the necessity of letting the human decide to which degree, and to what purpose adaptation should be practiced" (2009: 8). Even though these concepts were introduced by Mey in the context of human-computer interaction, they do also make sense in the context of foreign language teaching, where the focus should not be placed on the language itself, but rather on the language users and the many contexts in which language is presented to them and in which they are supposed to interact through the language.

In referring to the spread and "worldliness" of English in the world, Pennycook (1994: 36), attempts to deconstruct the myth of a 'ready language' and of the acceptance of it as "continuous creative process"; the author is also sensitive to current forms of colonialism. He suggests to

> view language use in terms of discursively mediated social action, rather than in terms of a fixed system for analysis […] Thus, rather than attributing an a priori ontological status to English in the world, English as an International Language can be understood as a discursive construct; rather than being some objective descriptive category, it is a whole system of power/knowledge relationships which produce very particular understandings of English and English language teaching. (Pennycook 1994: 28)

Being aware of such power relations and how they are exercised through language should make those involved in language teaching more inquisitive about their own practice, and have them make decisions based on suitable criteria, in order to benefit both the teaching professionals and their students. This questioning of one's own practice in all of its aspects should also lead to teaching-related research, so that the professionals can reflect on their practice, and by rethinking it critically, become able to apply the available research resources to the development of the school routines.

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2. Basic Education Curricular Guidelines – Modern Foreign Language/State of Parana 'is the document that presents the curricular proposal for elementary and high schools in the State schools in Parana.

3. Curricular Instruction for the high school in Brazil is the document that guides teaching at the high school level and updates some of the issues already approached in other documents, including issues related to foreign language teaching.

2. Joining theory and practice towards adaptability

Within the scope of action research, the present work follows Franco's (2005) proposal of critical action-research. The author refers to this model as follows:

> … if this transformation is noticed as necessary from the researcher's initial work with the group, resulting from a process that values the experience of a cognitive construction that, supported by collective critical reflection, aims at emancipating the subjects and the conditions that the collective considers oppressive, this research takes on the character of criticality and, then, the concept of critical action-research is applied. (Franco 2005: 485; our translation)

In the present context, the authors "collective critical reflection" will be understood in light of the perspective presented by Pimenta (2005: 18), which establishes the difference between reflection as an activity inherent in humans and reflection as a concept, described as "a theoretical movement of comprehension of the teaching work". This concept is then broadened to comprise the complexity of the teaching activity within the collective, and for this reason the importance of collective reflection is emphasized, as it "leads to the need to transform schools into *learning communities* in which teachers constantly and mutually support and motivate each other" (Pimenta 2005: 26).

Henry Giroux also defines the teaching professionals as critical intellectuals, that is, professionals "whose reflection is collective in the sense of incorporating the analysis of school contexts in a broader context and giving clear direction to the reflection: an emancipatory commitment of transformation of social inequalities" (quoted by Pimenta 2005: 27). Such professionals should be aware of the pedagogical processes involved in teaching, as well as of the whole political load involved in the teaching activity. This would make them more aware of the language dynamics within the classroom (by choosing relevant subjects, for instance) and outside of it, by taking part in the discussions and decisions that regulate their workplace (such as on the school's curriculum and on community issues that could influence their practice and could have been managed by outside agencies without their participation).

The professionals described here are more than just teachers, passing on knowledge – they are also linguists in constant observation of the linguistic realities; they are aware of the intertextuality of each text, oral or written, and the effects generated by these relations in their practice. Silva (2015: 366) draws attention to the challenges posed to the applied linguists of our times; one of these is "to face the texts as movable forms in space and time" which would lead to the "construction of ethnographic perspectives that allow the reconstruction of the utterance movement and indexicality, linking them to live contexts". Professionals prepared to do so may well be able to create a much richer experience in their classrooms, as well as more meaningful ways of dealing with language through its use.

Based on these ideas, the writing of diaries was proposed as a chronicle of events in the classroom, the environment where the texts were produced. The diaries would be used later on as a source of material for discussion by the group of participants, and also be compared with the text of the official documents.

From the material gathered in the diaries, the reflections on teaching material, and the issues raised in the official documents (DCE and OCEM), the creation of a teaching sequence was proposed as an opportunity for the teachers to promote changes in the problematic situations they had observed. With these changes, they would be able to create conditions of adaptability through their teaching in accordance with the objectives of the proposed teaching sequence – something that could not be attended to by using the available teaching material.

Throughout the discussions, the group had shown some concern about how to teach genres in English classes; this was motivated by the policy established by the DCE (Paraná 2008). For the same reason, the group decided to choose genre as the backbone of their activities. Since one of the main problems seen was the lack of oral interaction in English in the classroom, the interview genre was chosen. However, although the group had defined the genre, the teachers were not able to suggest ways of preparing and organizing the necessary activities.

The steps followed throughout the development of the study aimed at contributing to the already existing reflections on the theme 'Language Policy and Language Teaching'. Also, the researchers endeavored, along with the participants, to create a space for discussion and improvement through self-observation and reflection on their activities. Here, the crucial moments of agency were identified and the active work of the professionals was evaluated. Also, the difficulties and insufficiencies still inherent in the pattern of passive interaction could be identified and taken up in order to be overcome and understood as part of an ongoing individual/professional constructive development. The proposed study also aimed at providing both the researchers and the participants with some space for practicing investigative skills, so that new initiatives in this area could be motivated and the use of techniques and research tools could be improved to secure a better understanding of the realities of the professional environment.

3. The English classroom – struggle and adaptation

Our data analysis in the present section on language policy is based on the status of English as a *lingua franca*. Therefore, it is important to bear in mind the following two factors when discussing the teaching and learning of English nowadays.

First, English as a *lingua franca* is nowadays a global reality. Yet the acceptance of this reality is not universal. Some researchers, such as Phillipson (1992, cited in Siqueira 2011: 343), have argued against the definition of English as *lingua franca*, by pointing out that its promotion as the "*only* language able to serve the purposes of modernity" merely reinforces the English language's prestige, to the detriment of other languages that could play the same role.

Second, one has to take into consideration that language is nowadays understood as a "form or process of interaction" (Travaglia 2001: 23), and that the individual, through language, not only externalizes a thought or sends a message, but also *does* things to those listening or reading, and interferes in their lives. Any language carries an ideology, and provokes different effects depending on the user's place in society – a circumstance which has important implications for language teaching.

Explaining how language works in interaction, Mey (cited in Silva, Ferreira & Alencar 2014: 135) points out that in pragmatics "language use cannot be explained from the *inside to the outside*, that is, from the words originated from a certain speaker to a certain listener […]. Conversely, this movement is seen from the *outside to the inside*, the focus is on the environment in which both, speaker and listener, find their affordances" Mey 2001: 221). This view empowers language users and refuses to limit them to a set of rules or to a particular language's format.

Taking into consideration the effects, both positive and negative, of globalization with respect to the teaching and use of English, the DCE does not mention the concept (or existence) of a *lingua franca*; and when referring to language varieties, it only addresses genre and levels of formality. By contrast, the OCEM presents some concerns with the local/global aspects of teaching language that might lead to re-thinking classroom practices, both in relation to the use of technology and to the issue of language varieties.

The data collected and reported here were not identified by names or numbers indicating the participants, as we understand this is an interaction between peers. It sometimes originates from diaries written by the participants during their lessons, at other times from the discussions taking place during the meetings with the researchers. Therefore, the reflections are presented only as data produced by a group of professionals discussing their practice, and for this reason their value is not based on which participant produced it. Moreover, the views shared during the meetings could have been produced by other participants in a group with the same characteristics as the actual one. It seems relevant, though, to highlight that the group of participants was initially formed by 10 teachers of English with over 5 years of experience in teaching foreign language in public schools in the south of Brazil. Throughout the study, four of the participants had to leave the group for different reasons; at the end of the study, the group had only six participants.

In the following, we present data describing some reactions to the official documents that were going to be read and discussed. These ideas were put forward orally by the teachers in the first meeting of the group:

> *I have the impression that there is no point in discussing* [the documents], *it's a top down approach*;
>
> (about the DCE) *the ones who wrote the document had the ability to exchange the term 'competences' with the term 'knowledge', but it is more a matter of vocabulary than of real change.*
>
> *here at the Education Regional Office there has also been a discussion on the change of foreign language tasks in the PSS* [the Serial Selection Process used to select candidates for study at the local university].
>
> *in fact we do not read the DCE or OCEM; we use the teaching material as a guide.*

These statements confirm data already presented by Gimenez (2009), who observed some distance between what the documents say and the reality of the classroom. Due to this distance, what is noticed is the lack of effective involvement on the part of the teachers in policy making; their statements have very little to say in practical terms. If these teachers' role, as pointed out by Mey (1998: 10), is to reform the learning process, as motivators and facilitators of this project, how can they feel so alienated from the official policy that is supposed to guide their practice? Also, how can these documents support the practice if they do not result from the actual needs of their users?

This data also raised some questioning in relation to these teachers' original professional education: to what extent are the universities aligned with the official documents? Can this lack of understanding of the proposal be seen as the result of an impaired education, in which there is lack of a critical discussion of the policies dealing with the school reality and its difficulties? How much have universities contributed to the adaptation processes occurring in the education scenarios? Maybe it is time the universities started rethinking their practice, starting from the needs listed in the documents, and backing up some present and future teachers' reform activities within the schools; perhaps they should even be taking part in rewriting these documents from time to time, as the policy is being updated constantly. Such a rewriting would take its point of departure in the school practices and in what is considered desirable and possible in the process of citizenship emancipation.

In a second meeting, the issue of how the official documents influence the classroom practice was raised. There was a moment of silence and then the answers came (some of them are reproduced below):

> *The document is already in the curriculum, so we keep rereading it,[…] these things are discussed at the beginning of each year, in the pedagogical meetings.*
>
> *Despite what the documents say, the decisions are made much more frequently at the school level, and even the at the teacher level.*

Again, what is noticeable is that the document does not seem to be a matter of concern for the teachers; it can be read through another person's perspective, such as that belonging to the Regional Education Office at the beginning of each school year, or even in light of the instructions given locally by the school direction or coordination. Thus, these teachers appear to have some autonomy and can develop their work in different directions if they choose, depending on their preparation and other factors that might influence their practice in certain institutions.

In the same second meeting, we read Calvet's (2007) text on 'Language Policy'. In that text, we learned about the birth of 'Language Policy" as an academic discipline whose origin coincides with that of the sociolinguistics. Only from 1959 onwards, according to Calvet (2007), the first work by Einar Haugen addressing "language planning" appeared (Calvet 2007: 12); and in 1964, "in a meeting organized by William Bright, at the California University", exactly when sociolinguistics was being promoted into a proper field of studies, this theme became more recurrent and its initial approach was broadened to new interpretations.

In accordance with this initial understanding: that a group of speakers of a certain language, no matter how small the group, can elaborate their own policy, but that only the state has political autonomy and the necessary structure to implement such policies,,the difference between language policy and language planning is clarified in Haugen's first model. At that stage, he distinguishes between the phases of language planning, namely, "the problems, the decision makers, the alternatives, the evaluation, and the application" (Calvet 2007: 22).

After that, other instrumentalist approaches were put forward, such as the one by P. S. Ray, who in 1963 "insisted on the language's instrumental character, considering that its functioning could be perfected by the intervention on writing, grammar or lexicon" (Calvet 2007: 26); or that by Valter Tauli, in 1968, for whom "language is essentially an instrument, in this term most trivial meaning, an instrument that can be improved, as it would be in the language planning task" (Calvet 2007: 27).

In 1983, Haugen resumes his initial model and, from Kloss's proposal of differentiation between "corpus planning", that is, "interventions in the form of the language (creation of writing, neologism, standardization)" and "status planning", which entails "intervention in the language function (social status, relations with other languages)" (Calvet 2007: 29) reviews the planning phases within the "notions of language form and function" (Calvet 2007: 30).

Even so, all the contributions proposed up to that moment for the implementation of the concepts and the discipline had been built based on views by linguists who did not live the situations they described. However, from that point onwards, some linguists that lived in a situation of diglossia started to take part in the discussion; Calvet (2007) mentions some of them: Robert Lafont, Lanbert-Félix Prudent and Lluis Aracil. Other dimensions of planning were addressed, such as the situation of conflict between the dominant language and the dominated one, which could lead to the disappearance of the dominated language, suggesting the concept of "substitution"; or even some process of recovery of the dominated language, which would then achieve a "normalization" situation (Calvet 2007: 33–34). At that point, Calvet (2007) observes that the linguists in question experienced more than a scientific motivation: they started to have an activist role in the development of the discipline; Calvet also draws attention to the fact that "sciences are rarely protected against ideological contaminations, and that linguistic policies and planning are not an exception to the rule" (Calvet 2007: 36).

Therefore, although language policy is a relatively recent field of studies, its concrete policies have been applied for a long time, and the implications affect the people's history and their organization in society. Apparently, these policies have not necessarily promoted more egalitarian societies or opened spaces for the more diverse voices that exist in the several sectors of society. What is observed in general, are policies created by a small group of technicians, sponsored by the State, that uses it to keep the s*tatus quo* and guarantee certain privileges of certain classes over others.

The main objective of our reading was to introduce the teachers to the topic "Language Policy". We also expected that, while reading this text, the group would begin to reflect on the importance of this discipline to their work, and could re-think the official documents in their practice, so that we could start the classroom observations for the diary writing in the following weeks.

The teachers had been invited to observe what happened in their classrooms (and how it happened) throughout the two weeks that followed the first meeting, and to reflect upon both the methodologies used and teacher-student interaction. After the classroom observation, the general issues raised and discussed in our meetings were based on what the teachers recorded in their diaries.

The first diary reported on a reading lesson. This teacher observed that the texts in the book were considered too long and difficult; this might justify the choice of genres like cartoons or recipes to develop students' reading ability, which is a vital component of university entrance exams such as ENEM[4] and PSS.[5] Pairwork was used in this class, which appeared to be a positive option in terms of classroom

4. This is the high school national exam which is organized by the Education Ministry to verify whether the competencies and abilities developed by the students who concluded high school are in accordance to the objectives proposed for this level of education. The score of this exam can be used by candidates to enter state and federal universities in the country.

5. This is a selection process that comprises tests at the end of each year of high school and whose final score (results from tests taken throughout the three years) can be used by candidates to enter the local university (State University of Ponta Grossa).

interaction and cooperation in solving problems. However, because the students do not speak English in class, their interaction was in Portuguese and the opportunity of experiencing the target language as a means to solve problems was missed. Finally, despite the potential of the text chosen, to discuss themes such as consumerism, the value of money, and the way people relate to what they have, the teacher's diary did not report on any such discussions; also, the objectives of the use of the text were not clear, since the students were asked to copy the text into their notebooks only.

The second diary reported upon the fact that a teacher, upon finishing the unit in the book that dealt with the English past tense, had noticed that the students needed some reinforcement of this particular verbal structure. This was a very positive trait, since it demonstrated that the teacher was sensitive to the group's needs in order to reach the objectives of the course. So s/he resorted to other materials, in order to complement the textbook's explanations; from the teaching plan, s/he chose the opportunity to have the students work with the genre 'cartoon'. Providing a list of the irregular English verbs used in the cartoon text was another positive way of having the students become independent learners of the target language, rather than using the teacher as a reference every time they needed the past form of a verb.

The cartoon presented a sequence of routine activities: the cartoon character goes to bed, is woken up by some noise, gets up to check it out, finds nothing, and finally goes back to bed. This sequence could have been used, for example, to place the students in the story, so that they had the opportunity to use the L2 to narrate something that had occurred to themselves; this would have created a situation in which the students would be able to experience the language based on a concrete happening in their own routines. However, this opportunity was not used.

The third diary reported the use of a teaching sequence, developed at the end of a teacher development course.[6] This unit promoted a discussion of homosexuality and social values – which shows the relevance of the teachers' taking part in continuous education programs exploring current themes. The discussion was extremely relevant and made it clear that respect for individuality and difference is now more important and necessary than ever, and that discussions of prejudice and its harmful effects must be promoted. While this teaching sequence encouraged the students' questioning, the discussion could have identified also other kinds of prejudices, not only sexual ones. The fact that the entire discussion (including the final text produced) was in Portuguese, not in English, was a limiting feature of this proposal, since for the students, using the target language to express their ideas about the world, and not only to talk about the language or to train some language

6. The State of Paraná has a teacher continuing education program which offers a course called Educational Development for Teachers.

structures, is an important part of the L2 learning process, and fundamental for the appropriation of the L2 by the learner.

The fourth diary followed the order proposed in the textbook, but because this was the book's first unit, it seems that the textbook had not been used in the classroom before the actual date (April 16). It presented two differences in relation to the other diaries: namely the inclusion of audio activity and the use of classroom objects to present demonstrative pronouns. But apparently the methodology was totally teacher-centered, with the discussions occurring in Portuguese, with production of the target language only in the controlled practice exercises in the book.

Diary 5 also revealed a teacher=centered approach, focusing on the procedures proposed by the book. The students and their contribution to the development of the lesson were not noticed, except when they solved their tasks. It seems that the discussion was at the level of decoding the text and trying to understand the author's main ideas. There was no space for subjectivity, or for identification with the target language based on the students' own proposals to use vocabulary or structures to which they had been exposed in the classroom.

The sixth diary raised the issue of the use of English expressions in Brazil at the level of identification, apparently with the aim to develop some reading strategy. The students could profit from some discussion on what this represented in terms of dynamics of the language or of present-day communication, and how this dynamics influenced their lives, but this was not encouraged.

The methodology and language concept underlying the reports above confirm data from current scholarship in the field (Silva 2003; Cavalcante 2003; Lucena 2006; Stefanello 2007) whose results point out a "language structural concept", "text explored only at the superficial layer of signification", "majority of expository lessons" and "traditional concepts of education and language".

The discussion resulting from these diaries pointed out some particularities of the local teaching that were due to the fact that the English tests used to select students entering the university were based on reading comprehension. The problem about this approach is that the focus on reading was only at the level of decoding the text; there was no discussion of the ideas in the text or the students' reaction to them. The lack of this discussion and the absence of oral work in the target language prevented the lessons from reaching broader objectives that would provide a real use of the language, or at least some practice that would help students to acquire the language and use it as a vehicle for their own ideas and communicative intentions. This points up an environment in which people are expected to conform to the current situation, without questioning it.

One discussion that bothered the group at the level of local high school teaching was that there would be a vote in the schools to decide which foreign language should be taught. The options were English and Spanish and the teachers were worried that if Spanish would be chosen, this would reduce their number of hours in the school, for example, or make them move to other schools in order to fulfill their working hours. At that moment, practical worries seemed to be more important to them than the meaning of language plurality in the communities. Again, accommodating to the situation seems to be the more attractive option, especially if one can benefit from such situation at a time when the community as whole may be faced with a lack of options.

Since this concern only appeared at the last meeting, and as it had a direct relation with the hegemonic position of English (Phillipson 1992; Pennycook 1994; Canagarajah 1999; Wright 2004), in the third meeting of the group we asked them to read a text about the OCEM that regulates the teaching of English and the teaching of Spanish. Besides addressing themes related to language plurality, this reading also proposed a closer look at the different kinds of curriculum, and how they manifest themselves in the practice of teaching languages. Based on this reading, the participants would observe and report at which moments and following which actions the different curricula (Gimenez 2009) appeared in their classrooms. The relevance of such discussions is directly linked with the political view of teaching and raising awareness of the kind of interests being favored by the school practices.

The curriculum theme seemed to be hard to be dealt with here, since only two diaries reported on the topic. Therefore, the considerations that follow also comprise the result of the discussions on this theme in the group's fourth meeting. There was no elaboration on the roles played by any hidden or informal curricula[for example, issues of ideology or the particular decisions made by the individual teacher, which are not explicit parts of the formal curriculum, seemed to be avoided. Another reason might be the fact that the participants were insecure to write or talk about it, since these issues go beyond the written curriculum prescription and might not even be considered in the working plan. Such issues might be at a level of involvement with the curriculum that was beyond the configuration of their teaching practice up to that moment. This seems to be a gap that should have been overcome by the initial teacher education, but was not. The result is that the qualification as a teacher seems not to address the need of an independent and competent political action of these professionals.

The group in general also agreed that, even if not cited in the diaries, the null curriculum also played a strong role in the English class, for several reasons such as the difficulty of the teacher with some aspects of the target language or the emphasis given to reading, aiming at university entrance exams, which take most of the time in the classroom and do not not leave space for the work with other abilities. Even students' difficulties were presented as a discouraging fact regarding a more demanding work with English. According to the data collected, students did not practice oral skills because they were afraid of exposing themselves, and they lacked the world knowledge and motivation to seek information; when they had access to information they did not know what to do with it, both in their mother tongue and in the foreign language.

Due to the many difficulties listed in this meeting, and already thinking of some intervention we suggested the reading of the article named "Genre in the English Classroom: an experience with teaching sequence" ("O Gênero Textual na Sala de Aula de Língua Inglesa: uma experiência com sequência didática", by Baladeli & Ferreira 2008). This article presents a teaching unit discussing citizenship and, based on the genre newspaper article, it encourages reflection on the relation of English teaching and students' social practices. The observation in the classroom and diary reports should be on social practices. This was also intended as a first step towards the production of a teaching sequence by the participants.

Again, only two written reports on the theme proposed were produced and presented in the fifth meeting. Reflecting on this fact, we thought that the group might not be really familiar with the topic, since despite the text in the previous meeting having provided examples of what the author proposed in terms of placing the work with the teaching unit in the students' social practices, there was no reaction to that. As most of the meeting time was used to read the text, there was no much time left to explore the model 'teaching sequence' or for a deep discussion on social practices. The lack of data in these diaries might mean that the group lacked knowledge about the theme in order to be able to position themselves in relation to what they had observed in this interval of two weeks in their classrooms.

In the fifth and last meeting, the discussion developed towards the link between language policy and public policies in general and the need to promote improvement. As one of the participants pointed out, *"the community always benefits from the discussions and reflections on how the school is and the public policies for education. It is important to notice that we (teachers) are not alone thinking a better school, with people who really love what they do and give their best to reach good results, even if with a reduced number of students."* The final remark refers to the number of students reaching good results. and it is worrying in the sense that there is no questioning regarding why it is a reduced number. The idea that only few students will achieve what is proposed by the school and by the teacher seems to be accepted. Here, there is some indication of the disbelief in the objectives of teaching English, and in the role of education nowadays in the lives of the huge number of students that attend regular schools every year.

The data also revealed some concern regarding the working plan and the teachers' qualification as English speakers. There is a reaction to the current condition a reaction which, in the course of continuous development programs (based on the real needs of teachers in relation to both fluency in the target language and their own qualification), could lead to a more definitive action of these professionals.

This movement could go towards "practicality" as presented and defended by Kumaravadivelu (2005), since the group agreed with one of the participants who expressed that "*all work that is well planned is important to improve our work with the students, it is good to know what can be improved, new techniques, these are ways of being updated.*" And also, "*courses for teachers could be 50% teaching theory and 50% English teaching practice*".

When expressing how the topics approached in the research benefitted the community, the ideas presented were:

> *the fact of discussing each school reality during the meetings made me realize that in the morning the students were more receptive.*
>
> *The intention to develop more motivating work in the classroom, knowing what the difficulties are and trying to find ways of teaching that integrate the student and their reality.*
>
> *I believe that the main benefit was to know and be updated on what has been happening at the university.*

As the group as a whole produced positive comments in relation to the benefits brought by the development of the research, a change in perception may have happened throughout the meetings; and the fruit of this intervention might be harvested in the future, if other situations of critical reflection and joint practice are proposed to these professionals. At the moment, it is still difficult to make both discussion and practical action develop simultaneously. Changes seem to be classified as *"what has been happening at the university"*, without considering that the changes that had been proposed or that might be discussed at the university should originate in the reality of what has been happening in the classrooms and in the communities where the language is being taught.

In this respect, Mey pointed out in an interview (Mey & Silva 2014) that people should be made to reflect about their own situation and should be given tools to carry out such reflection. This might mean that when a professional expects that the changes should happen at the level of the university and then reach their classrooms, they might lack the tools to reflect upon their action. In the same interview, Mey refers to the kind of education provided to immigrants in Sweden which makes them "conform to the society's by homogenizing and safe standards" […] "teaching these people things that are useful to make them pliable and affordable in society", so that they will lack the tools to fight for their own rights, or to understand that they can fight for the place they desire in society. When professionals in the classrooms cannot see their role as providers of these tools, they become limited in their action. At the same time, their students are not given the chance to experience the meaning of what they are supposed to learn, beyond the walls of their classrooms.

One big issue raised by this study was that not all steps of the action-research were accomplished by the group. One example of this is that few reports were produced in the written diaries; another is that the participants never produced the teaching sequence that had been proposed at the beginning of the study, even if at the time everybody seemed to agree with the proposal.

However, some change was noticed in the perception of how the classroom practices can be directed towards the students' more effective participation, and how this can be more productive. In an optimistic view, this change in perception might be the start of some change of practice, based on the possibilities constructed by the new methodology adopted. The part that was not accomplished weakened the initial commitment to the research, but this might also be due to the requirement of a critical reflexive positioning that did not not resonate with the participants' actions. This fact poses a serious question in relation to the perspective of language as well as to the teachers' role in these professionals' initial education and continuous development, since they were not able to become agents in moments of conflict when some positioning that was required beyond what they had understood as language teaching.

In this sense, adaptivity plays a role when the approaches and methodologies used by these teachers reproduce language policy by viewing language as an "objective descriptive category" (Pennycook 1994) while ignoring power and knowledge relations that cooperate in the use and (re)construction of language in social contexts. Thus, there is some top-down imposition of the language by the teacher, either from the curriculum or from the micro-universe of the classroom. Students are not invited to participate or have real involvement in the practices developed, while the new media contexts of language use, which require multilingual citizens who can be really successful in the most diverse social practices, are not taken into consideration.

Also, it becomes clear that the teaching material exports to the classroom all these issues of power and their potential appropriation by the target audience. For this reason, a critical reading of the material and a critical material production are necessary to reach objectives which are truly favorable to learning and the students' needs; similarly, it is of the greatest importance to consider the new media's role in translinguistic and transcultural environments and the language being used there to serve those that need it, Therefore, any material developed within a policy that ignores these issues will bring the same limiting characteristics to the classroom. In the current study, the lack of involvement of the participants in the production of the teaching material revealed a tendency to consume ready-made materials, regardless of how (un)suitable they might be to the local reality. Again, this represents focusing on language as a structure that can be presented through any vehicle, no matter how inflexible the contents or themes and the activities might be in relation to the students' real needs and interests, without addressing the need to develop adaptable tools that should have been fostered throughout the teacher education process.

Teachers' initial education should lead these professionals to develop the ability to evaluate situations and design plans with clear objectives, based on an assessment of how much work is needed. Such courses should propose discussions that go beyond the professional methodological capability, by raising ideological, ethical and political issues. In this way, through teaching English the teachers would provide their students with a path to emancipation and independence when dealing with their own issues. This would make both teachers and students better able to reason about and deal with everyday situations that matter in their lives.

Summing up, a critical view is fundamental so that the language taught can be used locally (or wherever else it is necessary) with intelligibility, without necessarily imposing a foreign culture or worldview on its users; this would generate a willingness to express one's own views throughout the learning of the target language.

In this sense, the DCE text refers to the content appropriation by students "through learning-teaching critical methodologies" (Paraná 2008: 25), but does not explore, for example, the kind of education teachers are receiving and what the students' role is in the construction of this knowledge in relation to the target language. The OCEM goes a little beyond this by presenting a proposal that imagines the students reflecting on their own roles as citizens while using the target language, making them understand what their place in society is, and even to what extent they consider this position suitable to them or if they should prefer a change (Brasil 2006: 91).

4. Conclusions

In the context of this study, a space was created that provoked the teachers to look into their practice, which in some situations was described as empty due to the lack of comprehension of the subject taught. At other times, the practice was considered unrealistic, being based on a model of ideal language, which in the current configuration was shown to be outdated as an objective. Also, by reflecting on the several aspects of teaching languages, in particular English, the teachers would be able to plan a new approach, confirming the importance of their students' learning, and rethinking the objectives to be achieved in order to make this language closer to the students' own social practices. Also, this should lead these students to a certain level of literacy that would make them better able to function in society relying on their own textual resources.

The reflections proposed above suggest the need for further studies involving language policy and education public policies, since it is not only the teachers' work in the classroom, but also the actions developed by the regional education offices and the Education Secretariat that should be based on the particular character of the communities they attend. These actions could benefit from the practical knowledge developed by the teachers while working and evaluating the theories developed in connection with these teachers' practice. thereby jointly creating new possibilities for the school community to grow, with a broad and active participation of all its constituents. The main aim of this education effort should be the emancipation of these communities through their active engagement; this engagement should aim at the reconstruction of the individual and the collective through the search of better solutions to cater for their specific needs.

Another area that could benefit from studies like the ones discussed above is that of language policy and teacher education. Initiatives to involve and integrate the academic community in the school community could create a new focus for future language teachers – a focus that always should be based on a critical and problematizing pedagogy. Critical thinking should be encouraged at all levels of education, since this is the only way adaptation can be realised through a conscious, participative understanding of the seriousness of one's role in a given community.

Finally, if we are to think of language teaching as a process of emancipation of those involved in language teaching, its use and formal instruction, emphasis should be placed on the contexts in which language is used, and on the users as the language's generators. These individuals should be given the chance to incorporate the taught language into their social practices; they should also be included in as many social practices as possible through the language in use. The classroom should be seen as only one of the instances in which this knowledge is to be applied, and the language being taught/being acquired should gain a new meaning for those involved in the process.

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Index

Humans are adaptive beings. Gradually, we have produced the fundamental capacities for our cooperation, recognition of intentions, and interaction which led to the development of language and culture. The present collective volume builds on an orientation to *pragmatics* as the sustained and principled human adaptability in interaction, form, and meaning. Working on different strands of such a socially oriented pragmatics, the authors gathered in this volume study the adaptability of language as shaped by the conditions of society, culture, and cognition. Grouped in four sections, the book's chapters explore the embedding of adaptability in language ideology, text, communicative practice, and learning. Adopting these various perspectives, the authors gauge how language users navigate the different layers of societal, cognitive, and communicative constraints, while adapting their communicative practices, language ideologies, and technologies of interaction to their everyday living conditions.

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