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7

Performing Metaphoric Creativity across Modes and Contexts

EDITED BY

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and Blanca Kraljevic Mujic

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Performing Metaphoric Creativity across Modes and Contexts

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For Miguel and Pablo
For Neven and Nesho

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Preface

We are used to thinking of books as finished products, objects we handle, read, use in class and in our research, things we talk and write about. This book is one of these objects, and of course we hope it will have this academic life, accompanying scholars in their daily academic tasks. However, the way we have experienced the book, as editors and authors, is more like a process, very much like a journey.

This volume originated as the natural continuation of the work carried out for the special issue for *Metaphor in the Social World* (2013) on 'Metaphorical creativity across modes and contexts'. Like many journeys, however, this project has taken its own direction and has led us through various routes and new destinations where it has grown in richness and maturity. The idea for the volume originated within the work carried out in the project funded by UAM-BSCH for cooperation between UAM and North American Universities, more specifically, the seminar 'Language, creativity and identity: Multimodal and cultural perspectives', which took place in Madrid on June 15th and 16th 2014. Fruit of this meeting are the contributions by Ray Gibbs, Eduardo Urios-Aparisi and Larry Zbikowski. We are very grateful to these authors for their patience and commitment all this time and for being our journey travelers from the very beginning. This journey would not have been possible without their presence and inspiration. Most of the other chapters are papers which were presented in other academic events: the seminar 'Metaphor in discourse: recontextualization across modes and contexts', which took place in UAM, in Madrid, on October 20th 2017 and was organized, like the previous seminar, by the UAM research group on 'Language and Creativity'. Some of the papers in the volume were also presented in the panel on 'Metaphor in discourse' organized by Laura Hidalgo-Downing and Laura Filardo-Llamas at the XX Conference of AELCO (Spanish Association of Cognitive Linguistics) in Córdoba in 2018. Some other chapters are contributions by scholars who are doing interesting work on the topic of the volume, whose work we have had the opportunity to see and listen to in other recent meetings. We are very grateful to all these authors for joining us on this journey.

The academic events which have allowed us to meet in 2014, 2017 and 2018 are the necessary stops in which we have exchanged ideas and advanced in the intellectual development of the volume as a joint project. But, equally importantly,

these stops have enabled us to share some of the emotional and ludic aspects of our experience that are such important parts of journeys and creative processes. Especially when working on creativity, it is not only the intellectual work itself which contributes to the advancement of a project, but the myriad of other small and big activities which we engage in and share as fellow travelers, in other words, the affective dimension of doing a joint project. All this creates an undercurrent to the work itself which gives our collective volume a specific meaning and value. The present volume would not have been possible without all these small and big tasks performed by authors and editors through time.

As can be seen by this outline, the volume is the result of the continued effort in time of numerous scholars, whose support and enthusiasm have made this project possible. It is also the result of our interest in the topic of metaphor and creativity over the last years.

It is now time to say thanks to all the persons who have enabled this project to take place. Our joint thanks go first of all, to the authors of the book and to the editors in the publisher John Benjamins. I am very grateful to Esther Roth, who invited me to submit a proposal on the topic of the present volume before I had thought about this possibility. And, of course, for her enthusiasm and continuous support and encouragement throughout these years. We are also very grateful to Patricia Lepae for her efficiency in the production process. We are also very grateful to the *Figurative Thought and Language* series editors in John Benjamins, Angeliki Athanasiadou and Herbert Colston, who received our book proposal very warmly from the very beginning and have since followed our process of review and editing the book with kindness and constant support. Our thanks go also to the authors in the volume, without whom this project would not have been possible. Thanks to all the authors for the enthusiasm, the camaraderie, the adaptiveness and creative commitment to this joint project.

Our participation in academic events, especially RaAM and IPrA, have been particularly fruitful for our present project, and we are indebted to numerous scholars and friends with whom we have had the opportunity to share and discuss our research over the past years. A special note of thanks goes to Charles Forceville and Elena Semino, whose presence in our lives as experts in metaphor and as friends has been particularly important over the years.

Individual thanks on behalf of Laura Hidalgo go first and foremost to Ray Gibbs for his continuous encouragement and support, for his advice and help throughout all this time, which have gone well beyond academic duty. His generosity and positive thinking have been like an engine that has kept this project going. The importance of his contribution to the volume, as an author, a scholar of reference and a friend cannot be stressed sufficiently. I would like to thank him for reading Chapter 1 and giving me his opinion and comments. Any mistakes that remain

are obviously my responsibility. I also wish to express my gratitude to Universidad Autónoma de Madrid for their funding of the BSCH-UAM project which allowed us to organize the first meeting in 2014 and the Faculty of Philosophy and Letters for the funding of the two seminars in 2014 and 2017.

We would like to end our acknowledgements by thanking our families, as always, in particular Miguel and Pablo, and Neven and Nesho for entertaining us during the hardest stages of the work process, and for their unconditional love and support.

Madrid, 1st December 2019

Laura Hidalgo-Downing and Blanca Kraljevic-Mujic

Introduction

Towards an integrated framework for the analysis of metaphor and creativity in discourse

Laura Hidalgo-Downing
Universidad Autónoma de Madrid

... Everything seems double

Methinks I see these things with parted eye

W. Shakespeare, *A Midsummer Night's Dream*, Act 4, scene 1.

1. Introduction

The present volume brings together some of the papers which were presented in the international seminar on 'Language and creativity across modes and cultures' (UAM, June 2014) and in the seminar 'Metaphor in discourse: recontextualization across modes and contexts' (UAM, October 2017), together with other contributions from prestigious scholars in the field. The relation between creativity and figurative language in everyday and artistic forms of discourse has in recent years received increased attention in studies on Conceptual Metaphor Theory, Discourse approaches to metaphor and Multimodal discourse analysis (for a selection of relevant works, see, for example, Cameron & Maslen, 2010; Forceville & Urios-Aparisi, 2009; Gibbs & Cameron, 2008; Hampe, 2017; Hidalgo Downing, 2015; Kövecses, 2010, 2015; Semino, 2008; Semino & Demjén, 2016; Veale, Feyaerts & Forceville, 2013). We draw on recent insights in these fields of research and offer a space for the interdisciplinary discussion of the relationship between metaphor and creativity by focusing on contextualization across modes and contexts and on the performative dimension of discourse practice. A result of the cross-fertilization between these disciplines is the interest in exploring the ways in which cognitive, linguistic, social and cultural factors intervene in the shaping, expression and understanding of creative products and processes in relation to the use of figurative language. The contributions to the present volume focus in different ways on these factors, often in combination, and on how they contribute

to our understanding of creative uses of metaphor and figurative language in different modes and cross-modally. In the present collection we see a reflection of the exciting moment in which an important part of the studies of metaphor and creativity find themselves at present.

The papers in the present volume draw on complementary approaches to the relation between metaphor and creativity, by touching in different ways upon some of the recurring themes in the volume, which are overviewed below: analyzing creativity as product and process, dimensions in the analysis of creativity, performance in understanding metaphoric creativity, and multimodality and problem-solving in metaphoric creativity.

The present chapter takes as a point of departure current research on metaphor and creativity within Cognitive Linguistics, Functional Linguistics-Discourse Analysis and Cognitive Psychology in order to select some key aspects within these traditions and suggest how they may be integrated and used for further research in this area. Section 2 provides a brief overview of how metaphoric creativity has been addressed in relevant research in the field, in particular with regard to the distinction between end-product and process-based analysis, with special attention to the levels of analysis when discussing metaphoric creativity in product-based approaches. Sections 3, 4 and 5 introduce the key concepts which are proposed for the integrated approach to the analysis of metaphor and creativity. Section 6 provides an overview of the contributions to the volume.

2. Approaching metaphor and creativity as product and process

Metaphoric creativity can be approached as a product, something we need to do as analysts, but also as a process (see Runco, 2004). Gibbs (2017b, pp. 319–320) uses a metaphor to illustrate two different methodological approaches to the study of metaphor which can be easily applied to the distinction between product-based and process-based approaches. An end-product approach to metaphor is like examining butterflies which have been pinned down in a show-case, while a process-based approach is like observing butterflies in the wild (Gibbs, 2017b, pp. 319–320). It is clear that both approaches are going to provide interesting and complementary details regarding the nature and behavior of butterflies but they require different methodologies.

Most linguistic studies of metaphor have addressed the study of creativity as product, that is, by analyzing the presence of creative metaphors in the discourses, objects and performances which are the result of the creative acts and practices of artists, cultural traditions and more mundane everyday activities. These include but are not restricted to the products and performances which are analyzed in the

present volume, such as paintings, musical pieces and songs, advertisements, children's literature, political cartoons and satire, films, popular science, architecture reviews and dance performances.

The study of creativity as process can be addressed, first, by focusing on creativity as flow, that is by exploring how it emerges as an ongoing process (see, for example Okonski, Gibbs and Chen, this volume); second, by exploring how creative acts and products are received by audiences or by subjects in experiments (see, for example Pérez-Sobrino and Littlemore this volume); and third, by exploring how creative acts are the result of complex processes of production, interaction and negotiation. This last dimension may involve considering how a film or a performance as a final creative product is the result of a complex process of production which involves creators, editors, producers, directors, sponsors etc. (see, for example, Urios-Aparisi this volume). Further research on creativity as process is addressed by studies in cognitive psychology which are beyond the scope of the present volume (for an overview, see Runco, 2004).

With regard to the analysis of metaphor and creativity as product, the cross-fertilization between cognitive and functional-discursive approaches has made it possible to offer the analyst a wide range of possibilities for the study of how the creative potentiality of metaphor can be observed in discourse. Figures 1a and 1b show the levels of analysis which can be established in order to explore how metaphoric creativity takes place in discourse.

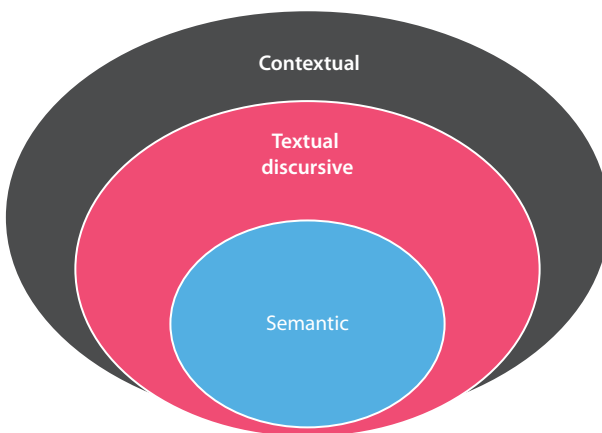


Figure 1a. Levels of analysis of metaphoric creativity

Figures 1a. and 1b. show a distinction between three levels of analysis: semantic, textual-discursive and contextual. Analyzing metaphoric creativity within the semantic domain may involve the study of novel metaphors, the creative adaptation of conventional metaphors and the creative elaboration and expansion of source

Semantic	Textual-discursive	Contextual
<ul style="list-style-type: none"> • Novel metaphors • Creative elaborations of conventional metaphors • Elaborating and expanding source domains 	<ul style="list-style-type: none"> • Textual patterns • Interaction with other discourse patterns • Multimodality: Interaction between modes 	<ul style="list-style-type: none"> • Cultural adaptations • Social adaptations • (Re)contextualization

Figure 1b. Levels of analysis of metaphoric creativity

domains (see Kövecses, 2010). At the textual-discursive level, metaphoric creativity can be explored by analyzing the occurrence of patterns such as repetition and recurrence, clustering, combining and mixing, textual extension and intertextuality, the co-occurrence of metaphor with other creative discursive strategies, such as narrative and humor, and the interaction between modes (see Semino, 2008). At the contextual level, metaphoric creativity can be explored by analyzing the influence of contextual socio-cultural factors on creativity, together with the creative adaptation of metaphors to new genres and contexts (re-contextualization) (See Kövecses, 2010; Semino, 2008, among others). Needless to say, the three levels of analysis feed into each other, so that analysts will often take into account semantic, textual-discursive and contextual factors when analyzing metaphoric creativity in discourse.

The importance of context in the analysis of metaphoric creativity is crucial, even when analyzing semantic and textual-discursive features, hence the representation in Figure 1a. which shows the three levels of semantics, text-discourse and context as building upon each other but also mutually influencing each other. A linguistic expression will not be metaphoric or creative per se, but this will depend on how it is used, on the context in which it is used. It is often the case that the metaphoric meanings of linguistic expressions are primed by their contiguity with other metaphorical expressions. Consequently, metaphoricity and creativity are typically emergent features in discourse (Gibbs & Cameron, 2008).

The chapters in the present volume combine to varying degrees the approaches to creativity as product and process, each of them shedding light on one of these dimensions and in some cases considering the interaction between process and product. In the sections which follow I propose some key concepts for the analysis of metaphor and creativity.

3. Dimensions of creativity

Creativity is by nature a particularly slippery and even messy concept (Veale, Feyaerts & Forceville, 2013; Jones, 2018). Rather than intending to further pinpoint creativity, in this volume we wish to embrace its elusiveness and explore its complex and fascinating nature in relation to the use of figurative language. For this purpose, I approach this relation by using as working tools for our understanding three relevant concepts involved in creative products and processes, namely, *adaptiveness*, *flow* and *emotion*. The first keyword, *adaptive(ness)*, is included by Sternberg and Lubart (1999, p. 3) in their definition of creativity as ‘the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., adaptive concerning task constraint)’. Adaptiveness enables us to understand novelty as conditioned by contextual factors, which may include, when applying it to creativity in discourse, the mode and the genre of expression and communication and the understanding that creativity emerges from the joint perception of producer and receiver. Similarly, adaptiveness is also crucial in the understanding of the creative process, defined by Lubart as ‘the sequence of thoughts and actions that leads to a novel, adaptive production’ (2001, p. 295). We understand adaptiveness as a particularly important feature of metaphoric creativity, which arises in the contextualization and recontextualization of already familiar and unoriginal concepts in new and innovative ways, often provided by new contexts and modes (see also Lakoff & Turner, 1989; Semino et. al., 2013; Maybin, 2016).

The second keyword is that of *flow* proposed by Csikszentmihalyi in his definition of creativity (1996, p. 110). Csikszentmihalyi observed that in numerous experiments in which he studied the performance of persons involved in various tasks, including artists, athletes and scientists, flow arose ‘when things were going well as an almost automatic, effortless, yet highly focused state of consciousness’, a state he describes as of optimal experience, though ‘it often involved painful, risky, difficult activities that stretched the person’s capacity and involved an element of novelty and discovery’ (1996, p. 110). This keyword enables us to focus on creativity as an emergent quality which arises in experience as an ongoing on-line process. This view is important in that it enables us to consider creativity as arising not only by means of deliberate and conscious acts of choice by speakers and creators, but also as emerging from the unconscious performance of both mundane and artistic forms of expression (See Okonski, Gibbs & Chen, this volume).

The third keyword is *emotion*, a crucial factor in the motivation of creativity (Lubart & Getz, 1997). The role of emotion in relation to the aesthetic experience is widely acknowledged, but sufficient attention has not been paid to the important role of emotions in our processes of producing and interpreting creative experiences, especially everyday experiences, and on how metaphor and figurative

language are used as problem solving tools which enable us to shape and express complex experiences. As argued by Lubart and Getz 'In terms of metaphor generation, emotional resonance can identify domains relevant to a problem for building a metaphor' (1997, p. 285). The contributions in the present volume draw on these three keywords in various ways, in order to show how they enable us to understand metaphoric creativity.

4. Performance in understanding metaphoric creativity

We have chosen the dimension of performativity across modes and contexts as the angle from which to observe the relation between metaphor and creativity, a choice which aims to explore in greater depth how contextual factors shape and constrain metaphoric creativity from a dynamic perspective.

Within Cognitive Linguistics, the term *performance* has been used to refer to the way in which metaphor arises as an emergent, dynamic phenomenon in the use of discourse in context as an online, ongoing process (Gibbs & Cameron, 2008; Jensen & Cuffari, 2014; Jensen & Greve, 2019). Metaphor use under this view is seen as grounded in different forms of enaction and embodied simulation (Gibbs, 2006, 2017a; 2019; Jensen & Cuffari, 2014). Enaction and embodied simulation are crucial mechanisms for the understanding of metaphoric creativity in socio-cultural contexts, since 'Culture does not just inform embodied experience; embodied experience is itself culturally constituted' (Gibbs, 2006, p. 37). Moreover, 'Enactment is not simply a thought sequence we entertain but action actually performed' (Gibbs, 2006, p. 265). A reader of a text, viewer of a painting, a listener who listens to music, does so by actively engaging in the task, not by passively receiving information (see Okonski, Gibbs & Chen, Zbikowski and Caballero, this volume). Thus, multimodal performance and enaction can be understood in two ways: either multimodal metaphoric creativity is actually performed in the analyzed data (a music or dance performance etc.), or, additionally, it may also be enacted by the participant who engages in watching, listening to or reading a particular creative piece. In this sense, the receptor enters the imaginary world offered by the creative act, 'as if' he or she were experiencing the event (Gibbs, 2006, 2019; Jensen & Cuffari, 2014, Caballero this volume). This conception of metaphor use as performative is also clearly grounded on the approach to metaphoricity and figurativity as resources for the interaction with our contexts and our movement in space in what has been recently called ecological cognition (Gibbs, 2019; Jensen & Greve, 2019).

All of the papers in the present volume share a view of creativity at the level of cognition as involving three crucial dimensions: imagination, inferencing and emotion.

Within current approaches to creativity in Discourse Analysis, the term *performance* is being used to refer to a specific conception of language use in context (Carter, 2004; Maybin, 2016; Jones, 2012, 2016, 2018; Swann & Maybin, 2007; Swann et al., 2011). Jones goes as far as to talk of a possible ‘performative turn’ in present day studies of discourse. This author defines the performative nature of language as ‘the way in which it allows us to be “certain kinds of people” and engage in “certain types of activities” through an ongoing series of cultural performances’ (Jones, 2016, p. 68). The concept of performance is used in this tradition to describe creativity as a complex phenomenon which takes place on three levels: the level of language form, the level of language use and the level of social action. It incorporates the crucial assumption of Critical Discourse Analysis that choices in discourse are not just choices in form, but constitute discourse practices, which, in turn both reflect and shape social practices. Creativity is thus seen as a phenomenon which includes and goes beyond the use of patterns of discourse to those actions that are necessary in order to understand the creative process in context: the cognitive processes that underlie both the realization of creative acts and the understanding and reception of metaphoric creativity, and the social and cultural processes which constrain and enable metaphoric creativity. Understood in the performative sense, creativity is not restricted to the ability of an individual, but rather, is a collaborative endeavor which originates in interaction and as a negotiation between different participants (see Urios-Aparisi; Hidalgo-Downing & Filardo-Llamas, this volume).

The conception of metaphoric creativity as performative and as being approached at the cross-roads between cognitive and discourse analytical approaches is represented in Figure 2. which provides a working model for the analysis of metaphoric creativity. This working model aims to capture the motivating forces which underlie metaphoric creativity as a form of change.

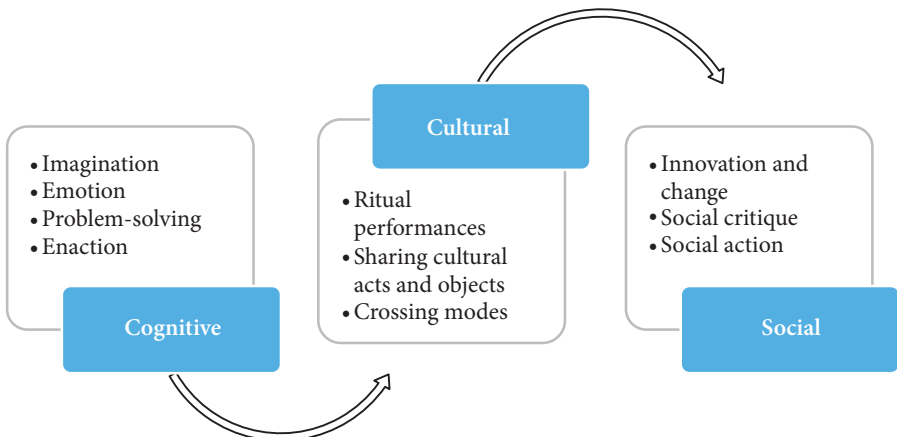


Figure 2. Performing creativity: Motivating forces for creativity

This view of creativity as performative underlies the conception of creativity as potentially world-changing. World-changing creativity involves not only artistic or big C creativity, but also those small everyday acts which cumulatively bring about changes in society and may involve small c or everyday creativity (Jones, 2016; Urios-Aparisi, this volume). World-changing creativity as social action is typically understood as a subversive or innovative act in which the aesthetic experience goes beyond the self and becomes an instrument of social contest and challenge or of aesthetic innovation. Examples of this are the papers on political cartoons (Marín Arrese; Domínguez) and satire (Naciscione), on adoption literature (Calvo Maturana), and on U2's songs (Hidalgo-Downing & Filardo-Llamas). The performative dimension of metaphoric creativity and its world-changing potential is also present in the way discourse practices shape and articulate social practices such as those performed in professional discourses (see Caballero; Williams, both this volume).

The changing potential of creative metaphor is also performed by appealing to our emotions (Gibbs and Cameron, 2008; Maybin, 2016). Creative acts can move us in the sense of arousing our emotions, feelings and senses or taking us through imaginative leaps which are world-changing at the level of the self and of aesthetic innovation. Creativity is thus a motor of change both at the level of the individual and the collective experience. This is illustrated in Figure 3, which shows how cognitive changes at the level of self, cultural changes in the (re)shaping of cultural traditions and performances and social changes in the form of social action may give rise both to everyday creativity and to world-changing creativity.

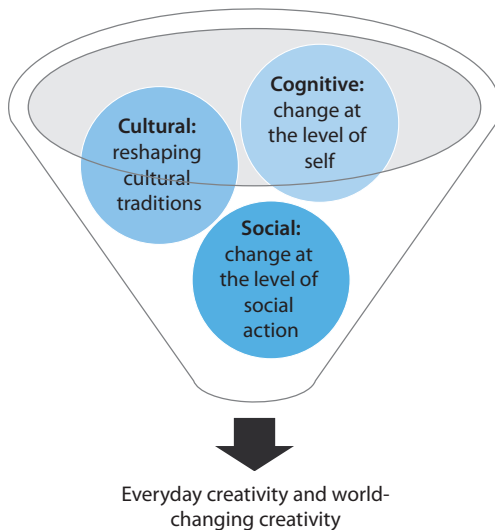


Figure 3. Results of creative acts and practices

In the present volume, this potential of metaphoric creativity to change the self through emotion is touched upon by all the chapters and is addressed in greater detail by the contributions which focus on the production and reception of artistic creativity (Okonski, Gibbs & Chen; Zbikowski), on the reception of YouTube videos (Pérez-Sobrino & Littlemore) and on the relation between multimodality and multisensoriality (Caballero). Nair's contribution illustrates the interaction between both processes of creative change and innovation, by showing how Indian *rasa* performance as an artistic form of expression appeals to emotional change at the level of the self in the relation between performer and audience and on how local cultural patterns of creativity in Indian culture have resonances in global social changes and innovations.

5. Multimodality and problem solving in metaphoric creativity

The present volume explores how metaphoric creativity is expressed in various modes and how it arises in the interaction between different modes. Studying multimodality does not just entail studying the various modes of expression and their coexistence in actual language use, but also, it means looking at the ways in which different modes interact with each other to create a complex experience (see, for example, Forceville & Urios-Aparisi, 2009; Hidalgo Downing & Kraljevic Mujic, 2011, 2013).

A crucial point which emerges throughout the volume is the importance of cross-modality in our experience. As argued by Caballero (present volume) in her analysis of the architecture review, the multimodal experience not only involves the awareness of different modes and their affordances, but also 'how such modes enable specific forms of feeling and action'. Caballero describes such multimodal experience as a haptic, three dimensional experience which involves feeling, doing and other senses, including motion. We argue that part of the great potential of metaphoric creativity resides precisely in this capacity of metaphor to enable the crossing of boundaries between modes and the senses.

As observed by Jones, creativity seems to flourish at the margins and the borders (2012, p. 9), in its tendency to messiness (Jones, 2018) and in its resistance and elusiveness to being pinned down by definitions or pre-established assumptions and rules (see also Veale, Feyaerts & Forceville, 2013). Hence our interest in the crossing of boundaries between modes, between contexts and between cultures. The definition of metaphor itself as a transfer of meaning can easily lead to the understanding of metaphoric creativity as crossing a boundary, turning to something else.

In addition to addressing various modes and their interactions, many of the papers in the present volume illustrate the need which seems inherent to human

nature, to express an experience undergone in one mode by using a different mode, maybe, most typically, language. In previous research, an emphasis has been placed on the fact that we ‘translate into words’ our experiences of other modes, but with an implied drawback in this process, in the sense that language will never capture the potential for expression of other modes such as for example images or sound. The present collection, however, shows that this need to translate or transfer the experience of one mode into another is a natural process which actually enriches our experience. It is by moving freely between modes, by transferring and translating meaning from one mode into others that we gain complex pictures of experiences. The authors in the present volume explore this dimension in different ways. In all these works, there is an interest in exploring how people talk and write about creative experiences in other modes, often as they strive to express their emotions when performing or experiencing creative acts.

Why this need to express what we have experienced in one mode, typically non-verbal, in a different mode, typically verbal, and our tendency to use figurative language and metaphor in doing so? We wish to argue that this need may be related to one of the main reasons metaphor is used, pointed out by Gibbs, namely, the inexpressibility hypothesis (1994, p. 124). Gibbs argues that metaphor enables us to capture and express meanings which are otherwise very difficult to express by means of literal expressions. This argument is consonant with the view that metaphor enables creative problem-solving, especially when emotions are involved (see Lubart & Getz, 1997). Thus, the need to use words, to render verbally our experience of another mode and the use of metaphor may constitute a creative act in which we address the difficulty of understanding and expressing a non-verbal experience by verbal means.

In addition to allowing us to express complex multimodal experiences, metaphoric creativity also thrives at the borders between literal and figurative uses of language. An exciting dimension of analyzing metaphoric creativity in context is confronting the unstable nature of meaning, which often fluctuates between the literal and the figurative and requires us to perceive doubleness in experience (see, for example Urios-Aparisi, this volume).

6. About this book

The present volume can be grouped into several themes, each of which focuses on a genre in the expression of metaphoric creativity: metaphoric creativity in performance, music and lyrics, films and YouTube ads, political cartoons, professional discourses, images and texts and performance in culture.

The contribution by Okonski, Gibbs and Chen on ‘Multimodal metaphorical creativity’ opens the volume by exploring the complex and fascinating nature of metaphoric creativity in the performance of various artistic and everyday multimodal endeavors and in the ways people reproduce, write and talk about creative experiences. The authors argue that creativity associated with the use of metaphor does not necessarily arise always consciously, but, rather, ‘is performative and emerges automatically, for the most part, as part of the working “flow” of creative expression’. The authors explore this by discussing the results of experiments in which participants talk, write and perform actions with relation to various creative forms of expression, like music, dance, painting and advertising. Additionally, the authors argue that part of the complexity of metaphoric creativity has to do with the metaphoric nature of source domains. This has important consequences for the way in which metaphoric experiences and emotions associated with the source domain enable us to understand the relation between source and target domains as isomorphic, rather than as a mere mapping from source to target.

Chapters 3 and 4 address metaphoric creativity in music and song lyrics. In ‘Music, metaphor and creativity’, Zbikowski explores metaphoric creativity in music, an underresearched area, and in talking about music. Zbikowski analyzes various examples of musical pieces and how they are interpreted, showing the ways in which listeners tend to agree in general lines on the metaphoric interpretation of sound sequences. Zbikowski uses examples from different cultural traditions, like the pastoral scene and music used to express the movements of animals from the Western tradition, and the raga, from Indian performance tradition. Zbikowski shows that the expression and interpretation of music are highly imaginative and creative acts, in which figurative phenomena such as metaphor, metonymy and analogy play important roles. Zbikowski explains how metaphoric creativity is different in music as compared to language, by arguing that ‘music’s primary focus is on dynamic processes with deep and immediate links to embodied experience.’

In ‘Singing for peace: Metaphor and creativity in the lyrics and performances of three songs by U2’, Hidalgo-Downing and Filardo-Llamas explore metaphoric creativity in three songs by U2, “Sunday, Bloody Sunday”, “Please” and “Peace on Earth”. The authors analyze the three songs by U2 from the perspective of creativity both as discursive and critical social practice, which is shaped and reinterpreted in the performances of the songs in a videoclip and across live performances. Metaphoric creativity is analyzed as contextually motivated in three ways. First, with regard to creativity as discursive practice in the lyrics of the three songs, metaphoric creativity involves the conceptualization of the topic of conflict during three tragic events which took place between 1971 and 1998 during the period known as ‘The Troubles’ in Northern Ireland, referred to in the three songs. Second, metaphoric creativity arises in the multimodal (verbal-visual) construal

of one of the songs in a video clip, in which the band provide an interpretation of the song "Please". Finally, the authors explore the role of metaphors and metonymies in the potentiality for creative recontextualization of the songs, which have been performed to reinterpret other political conflicts and tragic events, such as the 9/11 attacks in the US.

Chapters 5 and 6 focus on metaphoric creativity in moving images, more specifically, films and the reception of YouTube ads. In 'Metaphor emergence in cinematic discourse', Urios-Aparisi explores metaphoric creativity in two films by analyzing the emergence of metaphors related to the domains of food and the city of Tokyo from the perspective of complex systems theory. The two films are *Lost in Translation* (2003), by Sofia Coppola, and *Map of the Sounds of Tokyo* (2009), by Isabel Coixet. Urios-Aparisi argues that creativity in film works like a complex system, in the sense that creative expression and meaning arise from the interaction and collaboration of various entities and parts of the film production process. Food and Tokyo are literal elements of the *mise-en-scène* of the films and, at the same time, are the site for the complex metaphorical representation of the internal inner states of the characters and of their emotions. As such, these metaphorical sites function as attractors in the complex systems network of the films.

In 'What makes an advert go viral? The role of figurative operations in the success of Internet videos', Pérez-Sobrino and Littlemore carry out an experimental study in which they explore the relationship between the presence and type of figurative operations as instances of creativity in 35 internet video advertisements and their popularity measured in terms of number of views. The authors focus on the influence of three variables on the degree of popularity of the videos, namely, the density of the figurative operations (the number of figurative operations in each ad), the different kinds of figurative operations involved (metaphor, metonymy, hyperbole, understatement, irony), the modes of representation (verbal, musical, visual or combinations) and the positioning of the figurative operations. Their results show correlations between the first three variables and video popularity when irony was involved. The study reveals the crucial role of the emotional dimension of creative expression and interaction in processes which involve metaphor, humor and dramatic irony.

Chapters 7 and 8 focus on metaphoric creativity in political cartoons and foreground the role of humor in the expression of social processes of protest. In 'Metaphorical creativity in political cartoons: The migrant crisis in Europe', Marín-Arrese explores metaphoric creativity in political cartoons about the migrant crisis in Europe as an ideal site for creative metaphoric recontextualization, in which humor performs creative social practice: 'Humor in political cartoons may be used as a weapon, as a form of subversive activity against the dominant ideology and may both re-shape or reinforce public opinion.' Marín-Arrese combines concepts

from Cognitive Linguistics and Critical Discourse Analysis to analyze humor as a creative instrument for social and political critique. The author highlights the powerful effect created by the multimodal combination of images with great emotional power and ‘the critical analysis of social and political issues’, which create highly complex messages.

In ‘Disentangling metaphoric communication: The origin and evolution of metaphors’ Domínguez explores the processes of genesis and evolution of metaphors in cartoons on events which have attracted public opinion in the recent crises in Europe. Domínguez explores metaphoric creativity in the multimodal discourse of cartoons by discussing how new metaphors arise when a communicative niche becomes available and how they evolve to adapt to new news contexts. Domínguez argues that new metaphors compete to occupy the communicative niche in a process which works like evolution, with the survival of the fittest and better adapted. In this process, new metaphors become memes, which propagate quickly in and across the media and adapt to new contexts, in a form of recontextualization. Domínguez also discusses examples in which two metaphors collaborate and evolve together, a phenomenon he calls metaphor symbiosis. Both the genesis and evolution of new metaphors and the collaborative evolution of metaphors in symbiosis illustrate the complex ways in which metaphoric creativity is adaptive in multimodal discourse.

Chapters 9 and 10 address metaphoric creativity in professional discourses. In ‘Sensory landscapes: Cross modal metaphors in architecture’, Caballero explores metaphoric creativity in the ways architecture reviews translate the sensory and kinetic experience of interacting with buildings in space. Describing a building becomes a complex process, a haptic or holistic experience which draws from various sensory experiences and from the enactment of motion in space. This approach to metaphoric creativity is understood as a process in which multimodal experience not only involves ‘the awareness of different modes and their affordances, but also how such modes enable specific forms of feeling and action’. Caballero illustrates her argument with numerous examples in which visual experiences are understood in terms of aural or tactile experiences, and in which the static nature of buildings is transformed into a kinetic inhabited space in which the potential reader moves. This chapter shows the creative potentiality of intersensory and cross-modal understanding in figurative language use.

In ‘Creative journeys: Metaphors of metastasis in press popularization articles in English and Spanish’, Williams explores textual processes in metaphoric creativity by examining a cross-cultural corpus of press popularization articles on cancer. Williams argues that the use of metaphor in press popularization involves the creative recontextualization of source domains which are found in more specialized scientific genres for metastasis. Williams examines the source domains

which are used and the creative discourse patterns in which the metaphors occur, such as clustering, extension, mixing and signaling, in addition to intertextuality. The results show that the frequency of use and variety of metaphors is higher in the Spanish corpus. These differences may point at culturally based motivations related to the way in which the topic of cancer is treated in the English and the Spanish press, and the different negative evaluations arising from the activation of the source domain of colonization. This study is an example of recontextualization as a discursive and social practice within professional discourses and the media.

Chapters 11 and 12 focus on metaphoric creativity as arising from the interaction between images and text. In 'Multimodal creativity in figurative use' Naciscione applies insights from Conceptual Metaphor Theory and Stylistics and Cognitive Poetics in order to discuss the way in which extended patterns of figurative thought are manifested in creative interactions of multimodal discourse in the media and in politics. Naciscione argues that phraseological units can be identified in multimodal discourse, and that these are manifestations of figurative thought. The author analyzes the occurrence of phraseological multimodal units which comprise one or more figures of speech, such as metonymy, allusion, visual pun, hyperbole and personification. The author discusses the relevance of an embodied approach to multimodal cognition, since it enables us to understand multimodal representations such as those in the press and in politics from a dynamic holistic perspective. Naciscione illustrates her points by analyzing various types of texts with verbal and visual instances of figurative language, most of which involve humor and satire.

In "Born from the heart": Social uses of pictorial and multimodal metaphors in picture books on adoption, Calvo Maturana addresses metaphoric creativity by discussing the role of pictorial and multimodal verbo-visual metaphors in a selection of children's storybooks on adoption. Calvo Maturana applies Forceville's concepts of pictorial and multimodal metaphors and their interaction with other stylistic features to analyze and discuss a selection of pictures from storybooks on adoption. Calvo Maturana shows how visual and verbo-visual metaphoric representation of participants and complex concepts related to the adoption process enable the writers of these books to develop 'a discourse of adoption'. Storybooks such as these provide invaluable resources for the re-writing of narratives of adoption, which have traditionally been based on the concepts of parenthood and family as determined genetically and by physical resemblance. Calvo Maturana illustrates some of the main strategies present in the use of creative metaphors which foreground the hybridity and diversity of the conception of adoption as alternative parenthood.

The volume closes with Nair's 'Coding figurativity: New modes of multimodality? Technology and creativity in 21st century India'. In this chapter, Nair explores the relation between metaphor and creativity by 'drawing on unfamiliar 'non-western' cultural traditions to augment current theories of creativity, coding

and performativity'. The author argues that 'decoding 'Indian' patterns of thought could offer critical insights into 21st century 'global' multimodality.' Nair takes as a point of departure the assumption that creativity relies to a great extent on the ability to follow and apply rules and patterns in risk-taking forms, so as to stretch the rules to breaking point. This takes place in modes that vary from poetry to computer coding, traditional and contemporary forms of expression in different cultures. According to Nair, creativity in these different cultural manifestations shares the following features: first, creativity relies on metaphor and analogical thought; second, creativity is performative; third, creativity involves emotion. To illustrate these points, Nair describes the main principles of *rasa* theory, a traditional Indian art form of performativity in which the communicative acts have important emotional content.

The contributions to the present volume have argued for a view of the relation between metaphor and creativity as contextually driven and shaped. This view of metaphoric creativity in context has foregrounded the dimension of how creativity arises in the performance of everyday and artistic acts. Performativity has been understood as articulating the world-changing potential of creative uses of metaphor, in its ability to create complex discourse patterns, in its ability to evoke emotions in the audience and promote changes in the self, and in its ability to invoke social action and change. Furthermore, the contributions to the present volume have shown that multimodality is a natural site for metaphoric creativity, especially when considering how the interaction between various modes, the senses and motion gives rise to complex experiences.

Further research is needed in the study of metaphoric creativity in context, in particular with regard to the study of this phenomenon as performative and multimodal. Some of the topics touched upon by the contributions of the present volume point at interesting future directions, for example, how creativity arises in the flow of experience, rather than as a deliberate, planned act, the experimental study of the reception of creative metaphor in various discursive genres, the emergence of metaphor as articulated both by multimodal, multisensorial and kinetic means, the role of metaphor and creativity as persuasive tools for social action and change and the complex interaction between producers, creators, receivers and audiences in the understanding of creativity as process.

Additionally, the study of metaphoric creativity in creative products and processes also deserves further attention, in particular regarding the interaction between metaphor and other figures of speech such as metonymy, hyperbole, irony and humor, in the production and reception of creative acts, the role of emotion in understanding metaphor and creativity, the factors which intervene in cultural variation and the creative figurative uses which characterize different discursive genres and communicative practices.

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Metaphor in multimodal creativity

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This chapter describes the role that metaphor plays in multimodal creativity in several creative endeavors, specifically music, art, dance, and advertising. Many creative instances of metaphor performance rely on entrenched metaphorical concepts that get manifested in very specific, concrete ways in different artistic domains. Furthermore, although metaphorical thought and language are typically believed to map information from an embodied source domain into more abstract target domains, we argue that creative multimodal performance emerges from people's very ordinary, yet still highly metaphorical, conceptualizations of mundane bodily experiences. We explore multimodal creativity not just from seeking metaphors as manifested in different domains (e.g., music, art, dance), but also from the ways people talk about creative expressions and understandings.

Keywords: artistic expression, conceptual metaphor, creativity, dance, embodied metaphor, source domains

1. Introduction

Creativity is a multimodal affair. Metaphor is a critical scheme of thought that underlies a variety of verbal and non-verbal creative acts, including those that combine language, music, art, dance, and other expressive acts. But metaphor's exact role in multimodal creativity is somewhat disputed. Many scholars assume that creative acts arise quite consciously from a metaphorical idea that is then instantiated in different expressive compositions. Under this view, metaphor is part of an actor's conscious experiences before it gets transformed into some concrete verbal or non-verbal expression. A different perspective on metaphor and creativity suggests that metaphorical ideas are a fundamental part of unconscious human cognition so that actors can simply express themselves in various multimodal ways without first having a conscious metaphorical thought in mind beforehand.

This view assumes, then, that metaphoricity in multimodal expression is performative and emerges automatically, for the most part, as part of the working “flow” of creative expression.

This chapter describes the role that metaphor plays in multimodal creativity through examination of several creative endeavors, specifically music, painting, dance, and advertising. We maintain that creative individuals can surely think of metaphor in very conscious ways. However, people are not typically aware of the fact that what they think and how they act are constrained by unconscious metaphorical schemes. Furthermore, metaphorical thought and language are typically believed to map information from an embodied source domain into more abstract target domains. Yet we will argue that many forms of multimodal creativity are grounded in people’s metaphorical understanding of specific source domains. In this way, part of the roots for creative multimodal performance emerge from people’s very ordinary, yet still highly metaphorical, conceptualizations of mundane bodily experiences. We explore multimodal creativity not just from seeking metaphors as manifested in different domains (e.g., music, painting, dance), but also from the ways people talk about creative expressions and understandings.

2. Music

Talking about music almost always elicits a flurry of metaphors. Consider, for example, one discussion, from June 2013, of a work by Igor Stravinsky, as performed by the San Francisco Symphony Orchestra:

Michael Tilson Thomas recently described the San Francisco Symphony’s Stravinsky festival as a “connect the dots” event. Friday’s terrific program was just that. The raw materials for Stravinsky’s astonishing imagination – the keening, unvarnished vocal music of rural Russia – were laid out at the start of the night, and it flowed from there, winding toward ‘Le Sacre du printemps’ (“The Rite of Spring”), performed with a clean wallop...“It’s music that gets the blood rushing with its howling vocal lines, clangorous spirit and clashing, clustered harmonies. Eerie and celebratory, both, it imprinted itself upon the composer.”¹

The writer clearly interpreted this musical performance in varied metaphorical ways, noting very particular sensory and spatial dimensions of what the music felt like, such as “unvarnished vocals,” “laid out,” “flowed,” “wallop,” “howling,” and

1. <http://www.mercurynews.com/2013/06/22/review-san-francisco-symphony-triumphs-on-stravinsky/>. We note that the idea of a “connect the dots” event echoes ideas from John Cage and Merce Cunningham’s innovative musical performances. Thanks to Laura Hidalgo Downing for this observation about intertextuality in musical metaphors.

“clashing, clustered harmonies.” More generally, this discourse is structured around the entrenched conceptual metaphor *PROGRESS TOWARD A GOAL IS PHYSICALLY APPROACHING A SPECIFIC DESTINATION*, which arises from the image-schema of *SOURCE-PATH-GOAL* (e.g., “laid out at the start” refers to the *SOURCE*; “it flowed from there” refers to the *PATH*, and “winding toward ‘Le Sacre du printemps’” refers to the *GOAL*). Note the interactions between embodied metaphors and the critic’s emotional responses to the music (e.g., “music that gets the blood rushing”), which is a common feature of embodied metaphorical experience.

Does the presence of these instances of metaphorical language imply that people have metaphorical experiences when listening to music or even when people compose music? One response to this question stated that, “Metaphor theorists who assume that we conceptualize music in the same way we conceptualize language are naïve, or at least ill versed in aesthetics” (Spitzer, 2004, p. 77).

However, much research demonstrates how people ordinarily interpret music in embodied, often metaphorical terms (Johnson & Larson, 2003; Larson, 2012). Moreover, musicologists argue that widespread conceptual metaphors partly motivate the production and understanding of musical compositions. Even though musical experience may sometimes feel transcendent, and convey particular aesthetic impressions, this should not imply that music is non-conceptual or unrelated to bodily functions. As Zbikowski (2009, p. 363) observed, music’s “primary function is to represent thought patterns via various dynamic processes that are common in human experience,” especially in regard to emotion regulation, and the movement of bodies through space. To some extent, the writer’s description of the symphony’s performance of the Stravinsky piece suggests how basic dynamic sensorimotor actions and sensations can be realized both in language and music.

There is no doubt that music composers exhibit significant creative talent in composing new musical pieces. But how does metaphor specifically facilitate this type of artistic creativity? New research in whole body computing has examined how embodied metaphorical experience operates in the context of creating musical sequences. One study used an interactive audio environment, the Sound Maker, in which the system sensed people’s location and movements to produce different sound effects (Antle et al., 2009). Sound Maker “is a room with an interactive audio environment. Users control percussive sounds (four instruments) and associated sound parameters (volume, tempo, pitch, and rhythm) through their own full-bodied movement in the space” (Antle et al., 2009, p. 69). This type of movement-based exercise is common in the Delacroze Eurythmic approach to music education. Pairs of university students (no musical training was required) were asked to make different sounds through their body positions and movements in this space. The system was designed so that it would produce sounds given embodied metaphor-based mappings (e.g., volume is understood in terms of

MORE IS LOUD and LESS IS QUIET), or mappings that did not follow standard body and sound correlations (e.g., tempo is presented as SMOOTH IS FAST and CHOPPY IS SLOW) given, once more, different bodily movements through the sound space. For the embodied metaphor-based mappings, for example, speed was linked with tempo (fast is fast, slow is slow), activity with volume (more is loud, less is quiet), proximity with pitch (near is high, farther is low), and flow was linked with rhythm (smooth is rhythmic, choppy is chaotic). For the non-embodied mappings, flow was linked to tempo (smooth is fast, choppy is slow), proximity with volume (farther is quiet, near is loud), speed with pitch (slow is high, fast is low), and activity with rhythm (more is rhythmic, less is chaotic).

The participant pairs were, once again, given a series of sounds to make using their bodies within the Sound Maker that varied along a single parameter (e.g., volume, tempo, pitch and rhythm), or combined two parameters at once (e.g., volume and tempo). For example, in the “volume” task, participants had to create a sound sequence in which the volume varied from loud to quiet and then back to loud. They also had to verbally explain their movements after completing the desired sound sequence (e.g., for the volume task, making the sound go from loud to quiet and back to loud). The time it took participants to try and reproduce each sequence, as well as how accurate they were in doing so (i.e., correct, partly correct, incorrect), were assessed. Most generally, people did not successfully complete the tasks any quicker when using embodied metaphors than non-embodied ones. However, people were far more able to bodily demonstrate and explain the sound sequences they were given when using the embodied metaphorical mappings than with the non-embodied mappings. Some of this success using the embodied metaphors may be due to the fact that participants gave their verbal reflections on what they were doing and had done. In this way, people’s successful performance in creating the desired sequences arises from some multimodal interaction between their metaphorical language use and their metaphorical bodily actions. Still, the “embodied metaphor-based system facilitated a proportional mix of experiential and reflective intuitions that resulted in users more successfully learning to control and understand the system” (Antle et al., 2009, p. 74). People’s intuitive discovery of how to make certain music sounds in Sound Maker was significantly based on their past experiences of embodied metaphors (e.g., LOUD IS MORE).

These observations and findings lead to the conclusion that “We hear a sonic representation of the dynamic processes associated with these actions, and thus understood the actions through sound” (Zbikowski, 2013, p. 113). For example, one may interpret pitches as being analogous to points in space and yet also conceive of the movement through space via the dynamic processes set up by a succession of pitches. As Zbikowski has also argued more generally

language and music may simply offer different resources for structuring thought: language excels at capturing objects, events and the relations that hold between them, but is less good at representing dynamic processes; music, by contrast, excels at representing dynamic processes, but represents objects, events, and relations only under the most contrived circumstances. (Zbikowski, 2009, p. 379)

Musical metaphors arise from pervasive conceptual metaphors underlying metaphorical language, but also express slightly different facets of those metaphorical experiences, especially in regard to dynamic movement in everyday life, as seen in the participants' successful movements with Sound Maker to create different musical effects.

3. Painting

Art is another domain in which metaphors flourish when people talk about producing and understanding artworks. For example, Sullivan (2006, 2009) proposed that conceptual metaphor theory might be “a tool for understanding the artistic process.” She advanced several conceptual metaphors that capture what artists do when they think and act creatively. For example, a primary metaphor for the artistic process is *ART IS MONOLOGUE* in which the range of techniques (e.g., brushstrokes) is understood as vocabulary to be incorporated into creating the monologue. This metaphor underlies why artworks can be seen as conveying a “message,” a “protest,” a “statement,” or an “argument.” Artworks may even be “truthful” in exactly the same ways in which certain speech acts may be “believable.” Special cases of *ART IS A MONOLOGUE* are *ART IS STORYTELLING*, (e.g., Degas was once praised for painting “a prose ... articulating a new ... observation”), and *ART IS WRITING* (e.g., the abstract artist Calvin Seibert called his paintings “a diary, a visual text”).

Some artists consider themselves as having conversations with their art-making materials (e.g., canvases, clay), rather than with human observers (i.e., *ART IS A DIALOGUE*). The contemporary artist Masako Kamiya embraced this idea when she wrote, “I engage in a dialogue with paint. My statement is each dot I make with the brush; then I respond intuitively to each unexpected play of dots... This process is an interchange with the painting activity” (Sullivan, 2006, p. 6). Abstract art takes the conceptual metaphor *ART IS CONVERSATION* in a slightly different direction when talking about how the materials interact with one another as if in a spontaneous dialogue. The artist Annie Neely claimed that her artistic goal was to examine “how color, paint and form meet and respond to one another” (Sullivan, 2006, p. 7).

Viewers of artworks sometimes feel as if they are in conversation with artists, and vice versa, leading to the conceptual metaphor *ART IS CONVERSATION*. Performance artworks explicitly aim to bring viewers' reactions into defining an artwork's meaning or significance. To provide an example of the *ART IS CONVERSATION* metaphor, one performance piece exhibited "a series of blenders containing live goldfish which museum visitors could either blend or refrain from blending." This artwork clearly relied on people's reactions to the possibility of using the blender to pose questions about human nature and our responses to the environment. Projects like this represent a "conversation" more so than do traditional artwork-observer relationships.

Students can be taught to understand artworks in creative ways by imagining themselves as part of the performative practices in making new artworks. One project asked a group of students to write about small sections of Willem De Kooning's famous 1952–1956 painting "Woman 1." This painting is described in the following manner:

de Kooning painted a figure with gigantic eyes, massive breasts, and a toothy grin. Her threatening stare and ferocious smile are heightened by the artist's aggressive brushwork and frenetic application of paint. Her body is outlined in thick and thin black lines, which continue in loops and streaks and drips, taking on a life of their own. Abrupt, angular strokes of orange, blue, yellow, and green piled up in multiple directions as layers of color were applied, scraped away, and restored.²

Students were asked to look at the painting and imagine themselves as colors going from the bottle or tube to the surface of the canvas. Some of their descriptions included the following "I emerge from beneath, glowing through thin layers as a beacon of burning luminous, burning, light" (Rentz, 2003, p. 11).

My life was safe, nice, safely contained within a glass jar. I could see and enjoy life. I could watch creation and think about concepts. My color kept me warm and sensuous- the lid is off- the palate descends. Pain- anguish. I'm splattered over the surface, scrubbed, pushed, rubbed out. I feel thin, less than myself. Now I'm being overlaid – red and black are added to me.

I am the red oil paint squeezed from the tube. I have been tinted, scrambled, scrubbed, and dragged sometimes unwillingly and other times with an abandon, that just pushed other colors into submission. I become a bra strap, rouge roughly smudged onto a gaudy face, a tart, a mother's womb, and a tinted pink pair of socks. I feel used like my subject. (Rentz, 2003, p. 11)

These metaphorical understandings of De Kooning's painting demonstrate how much of people's appreciation of artworks is tied to the embodied, imaginative

2. <https://www.moma.org/collection/works/79810>

projection of themselves into the elements of artworks. Many of these imaginative projections instantiate aspects of the entrenched conceptual metaphor CREATIVE PERFORMANCE/EXPERIENCE IS TAKING A PHYSICAL JOURNEY (e.g., going from a nice safe place contained within a glass jar to being painfully splattered and pushed along the surface). Notice, however, that the imaginative projections create very different and individual enactments of this basic conceptual metaphor, and thus conceive of the artistic painting process in creative metaphorical ways. There is very likely a symbiosis between how artists, of all kinds, create artifacts by thinking of themselves as the paint, music, clay moving toward more abstract artistic ideals, and audiences' understanding of artworks imagining themselves as part of the elements and actions perceived in artworks. At the same time, it is important to recognize that people's experience of different source domains, such as TAKING A PHYSICAL JOURNEY, are not entirely non-metaphorical. People often experience mundane physical events, including travel from a source, along a path, to some destination in symbolic metaphorical terms as seen in the difficulties encountered along the way, the changes in course that are sometimes required, and how speed along the path is almost immediately understood as progress toward some goal (Gibbs, 2017).

Notice also that the above comments from participants allude to their emotional responses to their imaginative engagement with De Kooning's painting. In this way, people's conceptual, metaphorical, and embodied experiences of paintings, and other artworks, are typically evocative of a mixture of affective/emotional reactions. This makes good sense, of course, because people's real and imaginative understandings of all embodied metaphors (e.g., LIFE IS A JOURNEY) are not simply conceptual, but emotional as they adjust to different real-world and imaginative ecologies. Thus, making good progress toward a specific destination in LIFE IS A JOURNEY may evoke happiness, whereas struggling to deal with obstacles along the path of the journey may give rise to frustration, anger, and even despair in some situations. In the present context, the students may have been influenced by different embodied metaphors when they created their imaginative projections of being paint placed on the canvas, but all of these projections typically evoke very specific sensory and emotional reactions. A more general lesson from this study, then, is that embodied metaphorical creativity may refer to abstract domains of thinking, yet is always tied to sensory and emotional aspects of experience. Thus, we understand what is abstract in terms of what is sensory and emotional (Gibbs, 2017).

Artists may not always be conscious of the metaphorical ways in which they think about their creative processes. However, these implicit metaphors, based on the very common activities of conversing and storytelling, partly shape the process by which they create new artworks.

4. Dance

Does dance express metaphorical meanings? Some philosophers are deeply skeptical of the idea that the meaning of dance can be understood through non-verbal, conceptual metaphors (Van Camp, 1996). For example, one philosopher argued that “We can have metaphor in dance” but that “only through its expression in some representational system can we grasp the structure of metaphor, and the most elaborated representational system to us is linguistics” (Kittay, 1987, pp. 14–15). But does the fact that people can talk about their dance experiences using conventional verbal metaphors imply that they are thinking in entrenched metaphorical ways? One possibility is that verbal metaphors emerge in the context of people’s bodily actions, as with gesture, and not simply as after-the-fact reflections about what is really a completely nonmetaphorical experience.

One indication of the importance of metaphor in people’s in-the-moment dance experiences is seen in the ways that teachers sometimes instruct their dance students via the use of different verbal metaphors. Consider the following interview, conducted by Elaine Chen, with a Chinese ballet instructor, from Wuhan, China, who had taught beginning and advanced ballet classes for almost 20 years.

Chen: “I noticed that you tend to use analogies in your instruction, I was wondering whether this is because you used to teach child learners.”

Teacher: “Not necessarily, as I started teaching as an adult ballet instructor. This might be something subconscious, which I cannot really tell, as I always teach this way as far as I can remember.”

Chen: “I’m asking this because I noticed this is such a salient characteristic of your teaching discourse, and I’ve discussed it with other classmates as well, that you come up with these vivid analogies – ones that the others couldn’t easily think up. For example, you described the feet of some of us, who failed to point our toes, as spatulas. Also, you described certain students whispering to one another during the classes as ‘boiling porridge’. These instances are so vivid that they immediately conjure up the corresponding image/gestalt in our minds. Say, boiling porridge shares exactly the mumbling sound of people talk under their breath. But the rest of us wouldn’t entertain these interesting likenesses till you voice them. So I was wondering if you come up with them all of a sudden without much deliberation, or, you make them up beforehand.”

Teacher: “No. They came all of a sudden in most cases.”

Chen: “But do you recycle them? Do you even remember using them?”

Teacher: “I don’t normally remember what I said in the class, but once a similar scenario occurs (same mistake made by the students), I’d recall these words instantly.”

Chen: “Do you use these expressions in classes exclusively, or do you speak metaphorically all the time?”

Teacher: “In classes mainly.”

Chen: “But do you say such things purposively to invigorate the learning atmosphere as a pedagogical strategy, or do you simply say things that come to your mind, like, whenever they whisper, I think of boiling porridge.”

Teacher: “On the one hand, these words describe exactly what’s going on. On the other hand, they are humorous.”

Chen: “Also, I noticed that you incorporate analogies and metaphors a lot when correcting our postures, movements and alignments. For instance, when we were learning *couru* in *demi-pointe*, you asked us to imagine we were ‘swans stepping out of the lake’. But only a few of us got the posture and presence right. You called the rest ‘ducklings escaping from water’ and depict this by arms flinging out, butt protruding and running in abrupt haste. Also, you often require us to ‘gallop like deer’, while we ‘jump around like a bunch of monkeys being fed with peanuts’, or ‘patients suffering from hemiplegia’. Do you remember saying these at all?”

Teacher: “I do remember these. In terms of teaching, we have to explicitly address the essentials and standards of the movements. When students fail to meet those standards, we need to tell them verbally and vividly what the problem is.”

Chen: “What I’m interested in is that, there are apparently other methods to verbalize the error, which is to say things literally, like ‘straighten your back’, ‘level your shoulders’. I wonder how do you rate these different methods from a teacher’s perspective: Which one is more effective? Saying things directly and literally or using analogies and metaphors?³ What makes the differences?”

Teacher: “Metaphors are better received by the learners. When being instructed/corrected literally, they often take no notice. Whereas, when something vivid and concrete is offered, students form a clearer view of the do’s and don’ts and they are more likely to memorize them. At the same time, with overt contrast, they’d immediately acknowledge what they did wrong and what feels right.”

3. There is much debate over the difference between analogy and metaphor. One brief explanation suggests that analogies tend to be reversible, such as “An atom is a solar system,” which still expresses the same correspondences when reversed “A solar system is an atom,” while metaphors tend to be irreversible such that one cannot alter “Juliet is the sun” to “The sun is Juliet” and have it express the same metaphorical mappings.

Chen: “In that sense, I’m curious whether these tokens are improved ones like the ‘boiling porridge’ that they are invoked by one particular moment, or you plan them before the classes, or they are part of your teaching phrases package, which you choose to reuse.”

Teacher: “There are common mistakes shared by most students. And, as a matter of fact, I have been teaching for many years, which means I notice these same problems time after time. These words simply come out from my mouth involuntarily.”

Chen: “Can you think of other examples yourself?”

Teacher: “I really cannot think of any... They are contingent upon the specific scenarios I came across in the classroom. Without the stimuli, I cannot recall any of the expressions.”

At this point in the conversation, Chen asked the teacher to elaborate on a few of the metaphors he had employed in recent classes, which, again, the teacher was not able to readily recall on his own. Chen stated the metaphor, and the teacher then commented:

A. The Spatula

Teacher: “... when we tendu to the front, we have to point our toes. But some students fail to notice this, and their feet are relaxed as opposed to pointed. This kind of feet look like spatulas.” (see Figures 1 and 2)



Figure 1. Photograph property of the authors



Figure 2. Photograph property of the authors

B. Deer vs. Monkey

Teacher: “When we perform this sort of movement, we have to leap with light and cheerful steps like the deer. But for some students, especially when they haven’t achieved the muscularity, their pelvis and torso tend to sag, while the key of the jumping movement is on the contrary – to elevate the body. And still others behave pretentiously when dancing: Their heads and limbs move as they please, like monkeys in the zoo. In fact, we need to hold our torso upright and tight, with our heads only slightly swaying from side to side.”
(see Figures 3, 4, and 5)



Figure 3. 4. and 5. Photographs property of the authors

a. Going to School

Teacher: “This is the dance sequence (i.e., “Going to School”) we learnt last semester. It requires, mentally speaking, a high spirit; physically speaking, light and cheerful steps. But some students tend to sag: When they carry the school bags on their backs, it seems like they are carrying a huge burden. Moreover, there are other learners who tend to march forward (instead of hopping). These are both inappropriate. When we enact the steps of children going to school, first of all, we point our toes. One... Da... da... Two... Da... da... Secondly, we hop forward light-heartedly.”
(see Figures 6 and 7)



Figure 6. and 7. Photographs property of the authors

As shown in the above interview and the follow-up demonstrations, metaphors play an implicit role in dance teachers' discourse in helping students understanding the desired movements and thus part of the dance experience. Given its unique feature of "bringing dissimilar things together, in creating a relation where previously there is none", metaphoric imageries simultaneously nurture kinesthetic experiences while helping the student to engage with key technical principles that underpin the work (Swanwick, 2007, p. 497; Emslie, 2009). Detailed instances of metaphorical imageries observed in one dance classroom were analyzed in Müller & Ladewig (2014). In the ballet class, finding balance is feeling a silk thread pulling the navel towards the spine; in the tango class, finding balance is feeling stable like a ship with a pending anchor chain. Empirical studies on ideokinesis, the Franklin Method, Skinner Releasing Technique, and other dance practices built upon guided imagery in improving posture, alignment and fluency movement, had shown metaphors – a common component of dance classes, appear to facilitate skill learning and performance (Overby & Dunn, 2011). For example, Hanrahan et al. (1990) found the use of global images (e.g., "Imagine your whole body is thin and luminous") improved the dancers' performance of *developpé*. Imagining "whole body is a spring", "central axis is a rocket booster" increased participants jump height significantly (Heiland & Rovetti, 2010). Children who received metaphoric instructions performed a dance sequence more accurately than those who received verbal instructions or no instructions (Swada et al., 2002, Lacey Okonski and colleagues).

Even if teachers and dancers sometimes think, both unconsciously and consciously, of what they do via metaphor, do observers of dance interpret these performances as possibly conveying metaphorical meaning? One study, conducted by

Lacey Okonski at the University of California, Santa Cruz, (Okonski, Madden & Tothpal, In press) presented observers with a specific dance piece, and then asked the participants various questions to elicit their interpretations of what they saw. There were three types of participants in this study: dancers with formal kinesthetic training, literature majors with formal linguistic training, and participants with both formal kinesthetic and linguistic training. All three types of participants were expected to be able to discern the presence of various conceptual metaphors in the dance. Participants with both kinesthetic and linguistic training, however, may be best able to recruit relevant embodied metaphors when understanding and talking about the dance precisely because of their vast entrenched multimodal experiences of different conventional metaphors (e.g., *LIFE IS A JOURNEY*, *GOOD IS UP*). Additionally, if metaphors are truly based on multimodal cognitive resources, then those with kinesthetic training would be able to also complete this task with some degree of success. More traditional views on metaphor, that assume this is a purely linguistic phenomenon which is a special poetic ability rather than a basic principle of cognition, would predict that the literature students would be able to better articulate the relationships in this dance piece and also perhaps that they would be creative, poetic metaphors, not necessarily metaphors grounded in everyday source domains. We hypothesized that overall participants would be able to interpret the conceptual metaphors in the dance. We also predicted that both kinesthetic and linguistic training would facilitate non-linguistic metaphor processing.

The dance piece was titled “Breast Cancer,” and was enacted by a pair of dancers who expressed emotional messages of a woman suffering from breast cancer. The piece begins with the female dancer low in an almost fetal position and as she proceeds to fall and stumble into lower lifts. As the piece progresses however, she becomes more lifted and stronger in her movement, culminating in a very strong arabesque and gaining quite a bit of verticality with a shoulder lift as a final pose. Presented here are four photographs taken during the performance, with each illustrating a different possible conceptual metaphor (see Figures 8, 9, 10, and 11)

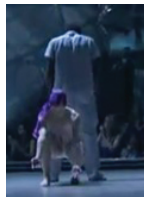


Figure 8. Initial pose, dance begins low with limbs drawn in. Photograph property of the authors

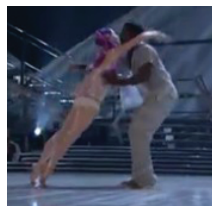


Figure 9. Falling into a lift, dance progresses but dancer still keeps things low and stumbles into lower lifts. Photograph property of the authors



Figure 10. Strong, lifted arabesque, the dancer is becoming increasingly strong and lifted towards the end. Photograph property of the authors

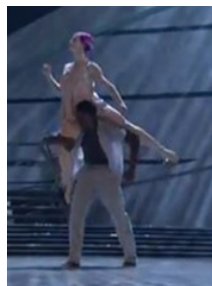


Figure 11. The final pose giving the lifted and upward theme a grand finale. Photograph property of the authors

A particular interest here was to evaluate the participants' abilities to verbally articulate the targets, sources, and mappings between source and target domains for the metaphors in this highly conceptual dance performance. More specifically, participants watched the dance piece (with its title) and then responded in writing to the following open-ended questions:

What emotions or emotional messages were being conveyed in this video?
(Target domains)

How were these emotions communicated?
(Source domains)

For both questions, participants were urged to provide specific examples.

An analysis of participants' written responses revealed that for the target domain question people gave a variety of responses all referring to different affective or emotional experiences, as in the following participant's response:

Delight, frustration, trust, salvation, confusion/disconnection.

Overall, across all three groups of participants, the most frequently mentioned target domains were the following:

Strength	.95
Love	.85
Frustration	.82
Sadness	.75
Anger	.75
Hope	.75
Pain	.60
Fear	.50

The diversity of target concepts mentioned suggests that participants understood the dance as reflecting a complex set of emotions. Even though strength and love were highly discussed, the presence of frustration, sadness and anger demonstrated people's diverse emotional reactions to the dance. This range of different emotions makes sense, though, given the complex ways in which the dance piece enacted the woman's changing experience of having and recovering from cancer.

An analysis of the source domains underlying the mention of specific target topics revealed the following list:

Physical proximity	.80
Verticality	.78
Speed/intensity	.70
Support	.65
Inward/outward	.45
Facial expression	.42
Entrainment	.38

These were more specifically discussed in terms of very specific dance movements, as seen in the following example:

Delight – the ‘happier’ moments when one or both of the dancers are moving exuberantly without falling/carrying the other.

Frustration – when female dancer pounds on male dancer’s chest.

Trust – when female leaps over/around male, indicating her dependence upon him to not drop her.

Salvation – when female dancer is brought from being low on the ground to high in the air – signifies movement of extreme empowerment, liberation.

Confusion – there is a moment when the dancers appear to stop moving in time to each other and the music.

As seen in this example response, participants often defined the target domains using physical source domains from the dancer’s movements, individually and interacting together as dance partners. There are mentions of verticality, a prevalent source domain which was thematic in many responses, when this participant defines happiness as a moment where there is an absence of falling, when he uses verticality to define trust as when the dancer can leap up to the lift without fear of falling, and salvation as the progression in the dance from being low in the ground to high in the air. These different aspects of verticality are used to define multiple target domains creating a rich interpretation of exactly how the dancer’s movements express abstract and/or complex emotional messages. There were also times when multiple source domains were used to define a target as when the participant talks about falling and carrying which reflects the source domain of support as well as verticality to describe the target domain “delight.” Likewise, there are sometimes multiple targets defined at once as was the case here for salvation where the participant also notes that this expresses “extreme empowerment” and “liberation.”

Another interesting result was the finding that those with kinesthetic training were actually more likely to articulate the source domains that defined the emotional concepts listed as target domains. Those with kinesthetic training (who did so 93% of the time) and those with both linguistic and kinesthetic training (who did so 100% of the time) seemed to have an advantage over those with only linguistic training (who did so 88% of the time). This suggests that thinking about metaphors is not merely a linguistic phenomenon and that non-linguistic experience can facilitate embodied metaphor interpretation and suggests that multimodal metaphors are a ubiquitous aspect of our conceptual system.

Dancers can readily embody metaphor in their performances and audiences can readily infer metaphorical and emotional patterns when viewing dance. Observers draw specific movement to meaning mappings very quickly (participants only watched the video once and they readily answered all questions usually in under 20 minutes and seemed to enjoy the task). At the same time,

though, participants still interpreted the dance in varying ways, similar to other art forms, such as when some people interpreted the final lift upward trajectory as symbolic of going to heaven while others interpreted this as a sign that she had defeated the cancer. While these results demonstrated that participants were readily able to name targets and to describe the source domains used to embody those targets, these results also complicate the one-to-one mappings often associated with conceptual metaphors and reveal a more nuanced mapping dynamic where multiple targets or multiple sources are often blended into the same space. Indeed, many dancers reject analyses that reduce their creative performances to lists of conventional metaphorical concepts. For example, one dancer claimed that, “I enter the performing arena with no prearranged concepts” (Zaporah, 2003, p. 11). Still, dancers may not have full-blown conscious awareness of embodied metaphors that are implicit in their dance performances and can be, in some dances, spontaneously enacted in the very moments of when they move. In this way, particular entrenched, unconscious metaphorical ideas provide part of the motivation for how and why people creatively express themselves in dance and how observers interpret the possible meanings of dancers’ movements. As was also observed, even dance instructors may not be able to verbally articulate, when asked, the different metaphors they earlier employed to help dancers enact particular movements. Yet metaphors appear throughout their instructional discourse as if the teachers cannot help but to think metaphorically about how specific dances should be performed.

5. Advertisements

Advertisements have been long known to be a wonderful playground for multimodal metaphorical creativity. Many cognitive linguistic studies have explicitly explored the ways that adverts creatively manifest enduring conceptual metaphors, as well as give evidence of completely novel metaphorical mappings (Forceville & Urios-Aparisi, 2009). But it is still less known whether people necessarily discern embodied metaphorical knowledge when viewing, or even thinking about, advertisements. One project that attempts to study this issue uses the “Zaltman Metaphor Elicitation Technique” (ZMET), which is a qualitative methodology of in-depth interviews to probe people’s metaphorical thoughts and impressions of advertising (Zaltman & Zaltman, 2008). In a typical application of ZMET, adult informants were first asked to bring in visual images, in this case from advertising, and describe how each picture related to their general impressions of advertising (i.e., storytelling). Later on, informants described their impressions of advertising using the different senses of sight, sound, touch, smell, taste, as well as emotional

feelings that arose from these impressions. Informants then imagined a short movie that described their thoughts and feelings about advertising, most generally. Finally, the informants created a composite of their thoughts and feelings about advertising, again most generally. This was done by first having informants select specific images from the various pictures that they wanted to include in the summary image. A graphic artist then scanned these images into a computer and worked collaboratively with the informant to create a summary image.

The verbal protocols were analyzed to determine the conceptual metaphors that structured people's knowledge and impressions of advertising. First, researchers searched through the protocols for instances of metaphorical words, phrases, and expressions. Next, these verbal metaphors were compiled and analyzed to identify a set of thematic categories that indicated something about people's overall impressions of advertising. The next step linked the thematic categories to specific conceptual metaphors. Finally, a smaller set of deep metaphors (i.e., pre-existing mental models that enable people to interpret new experiences) was identified that represented a higher level of abstraction from conceptual metaphors which is still embodied to a significant degree. Most generally, based on over 12,000 interviews, the ZMET method has revealed that seven very broad deep metaphors underlie people's interpretation of their bodily life experiences: BALANCE, TRANSFORMATION, JOURNEY, CONTAINER, CONNECTION, RESOURCE, and CONTROL.⁴

One study using ZMET revealed that there were three deep metaphors (RESOURCE, CONTROL, and ESSENCE) that structured people's broad interpretations of advertising. Under these three deep metaphors were several groups of specific conceptual metaphors, including their particular source domains. The deep metaphor of resource, for example, was organized in terms of five conceptual metaphors: advertising as a hostess, teacher, counselor, enabler, and magician. For instance, the hostess metaphor is associated with the thematic category of advertising serving to introduce how products and services have different benefits and values, as seen in one informant's comment in reference to an ad for motor oil, "in an ad I read that I need certain oil in the summer and certain oil in the winter. I feel good... knowing that I am going to use the right product at the right time." Advertising as a counselor goes beyond the hostess metaphor to suggest emotional and cognitive benefits with a product or service, as seen in the

4. Of course, these "deep" metaphors share close similarity with both standard conceptual metaphors and different image-schematic structures, although their exact relations have not been explicitly spelled out by the ZMET scholars or marketing organization. Along the same lines, ZMET is mostly advanced as a marketing tool within the business world and has not been experimentally tested in any way. Zaltman and Zaltman (2008), along with a host of more recent informal publications describe the ZMET's many successes, but not in scientific, replicable terms.

comment “advertising helps me to know which products will and will not reflect the sort of person I am.” The magician metaphor describes an advertisement’s ability to make people think differently, beyond the ad content, as seen in participants’ comments that ads “stimulate your imagination” or “suggest avenues,” “open doors of thought,” or “evoke memories of happy things.”

The metaphor of advertising as a force refers to advertising’s powerful presence in contemporary culture, with different conceptual metaphors (i.e., advertising as omnipresent being, a nosy neighbor, a broken record, a con-man, and a seducer) mostly expressing negative views about advertising. For instance, informants commented that ads are things “you just can’t get away from” (omnipresent being), or are like “a horse sticking his nose through the fence” (nosy neighbor), that “are on again, and again, and again... pretty soon you tend to tune out” (broken record), or can “set a trap for you” to “get you to do what they want” (con-man), and “encourage me to buy things that I do not need” (seducer).

The final deep metaphor evident in this analysis was of advertising as an essence, providing idealized images of people and products. The main conceptual metaphor at work here is advertising is an evil therapist, as seen in the comment that ads “create within the individual feelings of anxiety, need, longing, desire, hunger, loss, helplessness, and anger.” But people also described a related metaphor in which these negative feelings “can only be relieved through the consumption of the product or service” being offered (e.g., OBTAINING A PRODUCT IS SATISFYING A PHYSICAL NEED).

In general, ZMET elicited a wide range of metaphors, most of which relate to ongoing bodily actions or performances, suggesting how people’s understandings of ads are deeply organized around different embodied conceptual metaphors. The beauty of the technique is that it systematically prompts people to creatively think and say more about what they conceptualize of particular conceptual metaphorical ways.

Finally, the informants created a composite of their thoughts and feelings about advertising. This was done by first having informants select specific images from the various pictures they initially brought to the interview to include in a summary image. A graphic artist then scanned these images into a computer and worked collaboratively with the informant to create a summary image. Consider two examples of this process in action.

One person was asked to describe his experience of attending plays on Broadway in New York city. His picture composite depicted several actors on the bottom moving around as if dancing with a picture of a busy Broadway street, full of cars and buildings in the background. Toward the top of the picture was a dark background filled with swirling waves of light and several white shadows of people moving, perhaps dancing, in and around the swirling yellow arcs of light. The man

verbally described the contents of his image in the following (Zaltman & Zaltman, 2008, p. 152):

The man floating means that the emotion onstage sweeps you up. You may get swept up in costumes, makeup, and the sets. or you get really sucked up into the story itself. You forget about daily aspects of life and just enjoy being at the play. The circles in yellow represent that floating, being-swept-away feeling in the whole experience.

In a different case, a young woman was asked to describe her experiences as a first-time mother. Her composite image depicted an ornate vase, sitting delicately with several complex stages arching upward. A pearl necklace surrounds the middle of the vase. Small pictures of a juggler and a clock are inside the vase. At the opening at the top of the vase sat a large beautiful flower, with an elephant sticking his nose into it, and with an array of missile rockets on the other side. Complete outside the vase sits a bathtub. The woman described her image in the following way (Zaltman & Zaltman, 2008, p. 153):

The strand of pearls connotes the circle of life. Within that circle, a budding, pinkish red flower supported by a vase represents a new baby girl and the shape of her life. The other transparent flowers, fading into the bottom of the vase, represent all the phases she has already gone through, memories of my first year with her. Above my daughter is a diamond-her birthstone-representing the purity, brilliance, and clarity of our new baby. It hovers above her because it also represents the life, happiness, and learning I want for her. In front and to the left, but also inside the necklace are a clock and a juggler-more about me than about my daughter. There never seems to be enough time, whether I am preparing for my new baby or enjoying every little aspect of her life while having my own life, I constantly juggle when to stay home with her and when to leave her with someone while I clean house, go to work, or go to the store. The juggler's balls of many colors show everything I juggle in my day. Having a baby is a balancing act-not bad, but busy.

These two composite images reflect people's creative attempts to describe their complex conceptualizations of, in these cases, attending plays and being a first-time mother, partly in relation to how these concepts are manifested in advertisements. People's verbal comments on their images of different segments of each composite image provides detailed information of the symbolic, often metaphorical, basis of their concepts for experiencing artworks and motherhood. One interesting element of people's comments is their implied suggestion that certain source domains are themselves understood metaphorically and not just when they are employed in metaphorical comparison statements. Many of the other source domains referred to in people's verbal protocols provide similar evidence of their thinking of these in inherently embodied metaphorical ways.

Once again, we see a tight link between verbal and non-verbal interpretations of metaphor. Although there are common tendencies across people in the ways they metaphorically imagine different abstract domains, their metaphorical realizations of these concepts are always particular and personal. As is the case with multimodal creativity overall, people's imaginative abilities are not unconstrained, but make use of conventional metaphorical concepts which are crafted in very individual ways.

6. Conclusion

Metaphorical creativity can be exhibited in a variety of modalities and not just through language. It is not surprising to see that people employ metaphor so frequently in multimodal creativity. Similar metaphorical ideas can be readily manifested in different linguistic and non-linguistic ways (e.g., *LIFE IS A JOURNEY*). Still, it is important to recognize that each concrete realization of some embodied metaphor is also quite specific both to the individual creator and the particular modality (e.g., art, dance, advertisement). Performing a dance that illustrates one's understanding of *LIFE IS A JOURNEY* is, after all, different than just talking about that same metaphorical concept in language. We should never ignore the particularity of creative metaphorical performances to focus solely on some putative underlying conceptualization, or conceptual metaphor. Metaphorical meaning and experience is always unique given a person's specific bodily enactments in a given context and task.

Our discussion of multimodal creativity also suggests that the use of metaphor in artistic expressions is by no means simply a conscious, deliberate affair. People's entrenched metaphorical ideas, which are part of their cognitive unconscious, clearly shape how they creatively express themselves in verbal and non-verbal ways. Metaphorical performances, as seen in a variety of mundane and more creative domains, emerge from a complex interaction of many cultural, social, cognitive and linguistic factors, most of which operate in entirely unconscious ways (Gibbs & Cameron, 2008). There are times, of course, when people may be asked to consciously think about the metaphoricity in their performances or interpretations of artworks. Yet metaphor scholars should not presume that creative metaphor use in multimodal contexts must necessarily be a product of the conscious mind with no involvement of automatic mental processes, including those related to embodied, conceptual metaphorical thinking.

Perhaps the most interesting conclusion of our examination of metaphor in multimodal creativity is the possibility that people's understanding of the embodied source domains within metaphorical ideas are themselves inherently

metaphorical (Gibbs, 2017). Although metaphor typically emerges from the mapping of knowledge and experience from a source domain to a distinct target domain, it is clear that people are often thinking of source domain experiences in metaphorical ways. Thus, the journeys in *LIFE IS A JOURNEY*, the conversations in *ART IS CONVERSATION*, to take two salient examples, are always understood symbolically and not just as rare physical action (e.g., the physical movements involved in taking journeys or in conversing). Moreover, people's metaphorical performances, both when enacting and interpreting metaphors in different modalities, are fundamentally tied to affect and emotion. Our imaginative projections into abstract domains via the body always give rise to many sensory, emotional nuances that define each creative performance in a unique manner. The symbolic, mostly metaphorical, understandings people have of ordinary bodily experiences should not be terribly surprising given the ubiquity of automatic metaphorical thinking in everyday life. People cannot help but to understand mundane actions as being related to larger symbolic, metaphorical ideas. For this reason, metaphoricality in the creative mind may not emerge from novel metaphorical mappings but from the inherent isomorphism between our understandings of both target and source domains.

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Music, metaphor, and creativity

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This chapter explores the resources for meaning construction provided by music and how musical communication exemplifies creativity. Using two short passages from Haydn's *The Creation* as examples, the chapter investigates how musical sounds are correlated with nonmusical phenomena through analogy, a cognitive process related to but distinct from metaphor. The relationship between analogy and metaphor is considered in some detail and connected to explanations of musical meaning construction that draw on semiotics and conceptual metaphor theory. This explanatory framework is extended to musical metonymy, illustrated by an example from Beethoven's *Pastoral Symphony*. The chapter proposes that nonlinguistic forms of communication like music provide important insights into analogy, metaphor, and metonymy, and thus into the study of human creativity.

Keywords: music, analogy, Haydn, nonlinguistic communication, meaning construction

1. Introduction

1.1 A musical bestiary

Let me begin with a musical example that will illustrate some of the key issues circulating around music, metaphor, and creativity. The short musical passage shown in Figure 1 comes about two-thirds of the way through No. 21 of Joseph Haydn's oratorio *The Creation* (a work that was premiered in April of 1798). The text for the oratorio was assembled by Baron Gottfried van Swieten from portions of Genesis and the Psalms, and included lines reworked from Milton's *Paradise Lost*; in the part of the oratorio in which No. 21 occurs the focus is on the spectacle of God filling the world with life. Just prior to No. 21 Haydn had built up to a grand chorus (in No. 19) that reflected on the sublime wonder of God's work, and had set the stage with a brief recitative (in No. 20) in which the angel Raphael described

the command through which God caused the earth to be populated with creatures of every kind. Now, in No. 21, Raphael describes the result: in the opening bars of the movement we are introduced to the lion, the tiger, the stag, and the horse, the character of each animal made clear by Haydn's musical accompaniment. Over the course of these introductions the flow of events has been rather uneven: although the overall tempo is marked as fast ("Presto"), Haydn's strategy has been to provide first an aural depiction of the animal – the roars of the lion, the leaps of the tiger, the bounds of the stag – followed by a short section of recitative that fills out the picture with a verbal description, such that the music moves by fits and starts. The music has also shifted between keys, with the number opening in B-flat major, shifting to A-flat major, and then moving on to D-flat major, all in little over a minute. It is at this point that the music shown in Figure 1 is heard: the tempo is now a relaxed "Andante," the key changes to A major (rather distant, harmonically, from D-flat major), and the roars of the lion or bounds of the stag have been replaced by a lilting melody in six-eight time, played by the flute. So what animal might this be?

Andante

40

Flute

Violin I

Violin II

Viola

Violoncello and Bass

p

pizz.

p

pizz.

p

pizz.

p

pizz.

p

Figure 1. Joseph Haydn, *The Creation*, No. 21 (recitative), "Gleich öffnet sich der Erde Schoß" ("Immediately the earth opens her womb") bars 40–43

Allow me to speculate on how two sorts of listeners might respond to this question. The first listener is one not acquainted with Haydn's music but who perhaps knows a little bit about the musical practice of late eighteenth-century Europe,

a practice that yielded the music we now call “Classical” (as distinct from the music we call “Baroque” or “Romantic”). That listener would encounter music that is quite orderly: the accompaniment provides a regular rhythmic pattern, the harmonies follow one another in a predictable way, and the melody progresses by easy stages, with bar 41 building on and expanding bar 40, and bars 42 and 43 providing a satisfying riposte that culminates in a graceful arrival. In terms of the sonic materials through which this order is expressed, there is a pleasant contrast between the fluid, clear voice of the flute and the subtle pulses created by the pizzicato strings. As a whole, then, the music shown in Figure 1 sets up a relatively relaxed, perhaps even contemplative musical environment, one that conforms with safety and security rather than danger and drama: my imaginary listener would thus understand that this is music meant to represent some sort of domestic animal. My second imaginary listener is one more familiar with the musical language of Haydn and his peers. This listener would almost assuredly recognize that Haydn has provided us with an example of a *siciliana*, a musical type which first emerged in the seventeenth century as a species of dance and which, by the end of the eighteenth century, was firmly associated with the legend and mythology of pastoral scenes. For this listener there is no doubt about what animals are being summoned: these are animals of the pasture like cattle and sheep, an inference confirmed by Raphael’s next words. And so while both listeners would recognize that Haydn (and van Swieten) had moved from thrilling and perhaps dangerous animals like the lion, tiger, and stag to creatures altogether more placid, only the second listener would have a definite idea about what sort of animal was being depicted.

The different kinds of meaning to which the music of Figure 1 might give rise – approximate for one listener, rather more exact for another – hint at the ways sequences of musical sound may shape the understanding. The first type of meaning is driven primarily by material properties of the sounds themselves – the pitches they comprise, the arrangement of these pitches over time (that is, their rhythmic disposition), and the instruments that give voice to these sounds – while the second type is largely conventional. I would like to propose that, in both cases, the attendant thought processes are shaped by the way musical sounds are organized. Put another way, the modes of thought prompted by music – and this includes conceptual metaphors activated by musical passages like Figure 1 – reflect the ways sequences of patterned nonlinguistic sound are shaped into musical utterances.

Fleshing out this proposal will, of necessity, require a bit of groundwork. The preponderance of the work done on conceptual metaphor has focused on language, and although there are studies of the way conceptual metaphors are manifested in descriptions of music (reviewed in Zbikowski, 2008) there is relatively little work

that focuses on musical utterances as a *basis* for metaphorical thought. To demonstrate this, especially in written form, requires using language to describe a mode of communication that is, in fundamental respects, independent of language. To get a sense of what such descriptions may offer and what they may fail to capture, let me offer an approximate illustration with an example taken not from music, but from sonic materials developed in the course of research into speech perception.

1.2 Sine-wave speech and words about music

As a way to explore just what features of human language were essential for the comprehension of speech, during the early 1980s Robert Remez and his colleagues developed a form of artificially degraded speech called sine-wave speech that captured only a small amount of the information from the normal speech stream (Remez, Rubin, Pisoni, & Carrell, 1981). To do this, they analyzed a recording of normal speech and then generated time-varying sinusoids to match the center frequencies and amplitudes of the first three formants. This created a replica of the core features of the original utterance, but without any of the local details that typically distinguish speech. The result of manipulations such as these sounds like a random sequence of whistles and bleeps – listeners often describe it as something they might hear in a science fiction movie. At this point, I would encourage the reader to visit <http://www.mrc-cbu.cam.ac.uk/people/matt.davis/sine-wave-speech/> to experience sine-wave speech firsthand, which can be done by clicking on the first loudspeaker icon on the page.

On their first encounter, most listeners find examples of sine-wave speech to be pretty much unintelligible. What is remarkable, however, is what happens after listening to the original utterance (which can be done by clicking on the next loudspeaker icon on Matt Davis's web page). Listeners who then return to the sine-wave version of the utterance typically find that it has become quite intelligible: the random sounds have resolved themselves into a meaningful unit of speech. Most of us would be hard-pressed to describe the salient aspects of the sine-wave replica – which, again, sounds to most listeners like a succession of random whistles and bleeps – yet after hearing the original utterance it becomes clear that there is indeed a coherent structure to the replica (revealed through our ability to comprehend the linguistic utterance from which it is derived). The situation presented by sine-wave speech, then, provides a rough approximation of the challenge of coming to terms with a musical utterance: although, with patience, we may be able to describe some of the salient features of such an utterance (just as we might for an example of sine-wave speech), such a description would fall far short of the experience of actually comprehending the utterance.

Again, I offer this example as an illustration of the challenge of coming to terms with an unfamiliar sequence of sounds (whether those sounds be related to language or to music). In what follows I will do my best to describe as accurately as possible the salient features of various musical utterances and to explain how they might serve as a basis for metaphorical thought – that is, I will use words to try to describe a mode of communication that, from a linguistic perspective, is unintelligible. As would be the case with linguistic descriptions of sine-wave speech, these descriptions will be, at best, approximate guides to the relevant features of the musical utterances with which I shall be concerned; as with the example of sine-wave speech, much can be learned by becoming acquainted with the utterances themselves.

1.3 Metaphor, analogy, and metonymy

One of the strategies I shall use to ground my accounts of musical utterances will be to approach the resources they offer for meaning construction from the perspective of a process related to but distinct from metaphor: analogy. Within the literature, the boundary between analogy and metaphor is at times fuzzy: researchers on metaphor have tended to ignore analogy, and researchers on analogy have tended to view metaphor as simply a particular species of analogy. In my recent work on musical grammar I have nonetheless found it productive to distinguish between analogy and metaphor, not least because analogy offers a useful way to think about processes of meaning construction that are independent of language. From this perspective, then, the connection between a sequence of sounds such as that illustrated by Figure 1 and the image of a peaceful animal (or simply a peaceful situation) relies on a capacity for making analogical connections between sounds and other phenomena. I believe this capacity can then serve as a resource within more complex networks of knowledge of the sort typically accessed through conceptual metaphors and which are deeply connected with creative thought.

A related matter concerns the relationship between metaphor and metonymy. In the simplest terms, metonymy can be thought of as a process of intra-domain mapping in which a part gives access to a larger whole (Kövecses & Radden, 1998). On closer inspection, however, metonymy offers additional resources for communication, not least because the relationship between part and whole can be wonderfully complicated (Langacker, 1999, pp. 62–67, 198–200). As it happens, part-whole relationships – if of a rather different sort – abound in musical practice. One example is provided by theme and variations form (which was especially common in Western music of the eighteenth and nineteenth centuries), in which individual variations point both to the theme and to the work as a whole. Another example is provided by the involved instrumental displays of many jazz musicians, which

often make scattered reference not only to prominent features of the main tune over which they are improvising but may also quote characteristic snippets from other tunes. Indeed, musical utterances can be seen to offer a range of interesting and possibly unique uses of metonymy, and thus invite further reflection on the basic phenomenon of part-whole relations in the service of meaning construction.

1.4 Music, metaphor, and creativity

As will emerge, I regard the production and reception of music as inherently creative acts – that is, productive of novel and valuable thought – not least because making sense of a musical utterance requires an act of the imagination through which patterned nonlinguistic sound is endowed with an immediate if ephemeral meaning. To be sure, there is not equal novelty or value in all musical utterances, but my concern here will be less with developing a metric for evaluating these features as it will be with developing an account of how musical materials are arranged to create possibilities for the construction of meaning that engage with metaphorical and metonymic thought.

In the first section that follows I shall offer a brief summary of research on analogy and show the part analogical thinking plays in our understanding of musical utterances. In the second section I shall explore the relationship between analogy and metaphor, and sketch how musical utterances can provide a basis for conceptual metaphors. In a third section I shall take up the matter of musical metonymy, and in a concluding section I shall offer some summary reflections on music, metaphor, and creativity.

2. Analogical thought and musical understanding

2.1 Another animal in the bestiary

As a way to set out more clearly the issues with which I shall be concerned, let me turn to another passage from No. 21 of *The Creation*, one that occurs just a moment or two before the one I considered above. This bit of music, shown in Figure 2, occurs immediately after the lion has been introduced (with low-register trills simulating his roars), and in it Haydn aims to summon the leaps of the tiger (the next animal in van Swieten's compressed bestiary). There is not really anything like a melody in this passage, only a sequence of brusque upward strokes that outline an A-flat arpeggio (in the upper strings, from A-flat3 to the arrival on the E-flat4 of bar 14, then from C4 to the A-flat4 of bar 15, and finally from E-flat4 to the C5 of bar 16), an ascent that is replicated in compressed form by the first

violins in bar 16. There is also not much by way of rhythm: to be sure, we are led forcefully to the downbeat of each bar, but it is only with the regular quarter-note chords of bar 16 that rhythmic progress takes on any discernible order. And with respect to harmony, the passage is quite static, simply prolonging an A-flat chord for its duration.

The musical score is for Joseph Haydn's *The Creation*, No. 21, bars 14–18. The tempo is *Presto*. The key signature has two flats (B-flat and E-flat). The time signature is common time (C). The score is for Violin I, Violin II, Viola, Raphael, and Violoncello and Bass. The score shows bars 14, 15, and 16. In bar 16, there is a triplet of eighth notes in the Violin I part. The lyrics "Hier schießt der ge-len-ki-ge Ti-ger em-por." are written below the Violoncello and Bass staff in bar 16.

Figure 2. Joseph Haydn, *The Creation*, No. 21, bars 14–18. Text translation: “Here the supple tiger springs upwards”

In their accounts of passages like this one, music scholars have typically availed themselves of the notion of “tone painting,” through which a sequence of musical sounds is understood to represent, or “paint,” a striking visual image. Thus the music of Figure 2 would be regarded as painting a picture of the tiger. Although such extramusical effects have long been appreciated for their novelty they have also been deprecated as a sort of *tromper l’oriel* not worthy of accomplished artists. Indeed, Haydn himself, in a letter from 1801 in which he commented on similar effects in his later oratorio *The Seasons*, characterized this sort of effect as “Frenchified trash” (Haydn, 1959, p. 197). That said, while it seems quite natural to

correlate sequences of sounds like those shown in Figure 2 with sudden, energetic movements by a tiger – and it is worth noting that, whatever Haydn or anyone else may have said about such tone painting, its success was broadly acknowledged – just why this should be so is somewhat difficult to explain. After all, within the natural world sudden energetic movements do not, as a rule, yield sounds anything like those produced by Haydn’s orchestra – indeed, the leaps of most successful predators are largely soundless. The explanation typically given during the eighteenth century, which is that the musical sounds mimicked sounds that could be heard in nature (Dubos, 1748, pp. 360–361), will simply not do. A better explanation is provided by research on analogy, which suggests that humans’ ability to correlate sound sequences with phenomena that might themselves be soundless relies on a cognitive capacity for analogical thought, a capacity that, in its fullest form, appears to be unique to the human species and that is connected with the kind of novel and valuable thought that characterizes creativity (Hofstadter & Sander, 2013).

2.2 Research on analogy

Most discussions of analogy begin with similarity, since it is the similarity of one thing to another that forms the basis for any analogy. For instance, a pen and a pencil are similar to each other both in appearance and in function, although the kind of marks these tools make on a writing surface (permanent or impermanent; of relatively consistent coloration or subject to gradation) are different. Analogy takes as its point of departure similarity judgements of a more abstract sort. For example, a finger is analogous to a pen in that it is an approximately cylindrical structure that ends in a point; unlike a pen or pencil, however, the finger leaves no discernible marks on the writing surface and its “cylinder” is firmly attached to the larger structure of the hand. Making the analogy between a pen and a finger, then, involves drawing structural correlations between the two: the cylindrical shape of the pen maps on to the shape of the digits of the finger, and the point of the pen maps on to the tip of the finger. With the analogy in place, we can imagine using a finger to “write,” or a pen as an extension of our hand. More generally, analogies involve mapping systematic structural relationships between a source domain (such as that which includes writing instruments) and a target domain (such as that which includes bodily appendages) for the purpose of extending knowledge from the source to the target, and – in at least some instances – from the target back to the source (Gentner, 1983; Gentner & Kurtz, 2006; Holyoak & Thagard, 1995, Chapter 2; Holyoak, 2005).

It bears emphasis that analogy is not simply about correlating elements from one domain with elements in another domain but about mapping relationships

between these domains. It is thus often described as concerned with relations among relations (or “second-order” relations): in the analogy between a pen and a finger, for instance, the relationship between *pen* and *finely tapered device for delivering ink* (by which I mean the business-end of the implement) is correlated with the relationship between *finger* and *tapered appendage for guiding communication*.¹ And so, while other species are able to make some very sophisticated similarity judgments – there is research suggesting that chimpanzees can understand the second-order relations basic to analogy (especially for spatial reasoning; see Oden, Thompson and Premack, 2001, and Call and Tomasello, 2005) and that bottlenosed dolphins can perform sophisticated body-mapping analogies (Herman, 2002) – current evidence indicates that no other species comes close to making or using analogies with the facility and speed of humans (Gentner, 2003; Holyoak & Thagard, 1995, Chapter 3). Of equal importance for human communication and reasoning, this capacity appears to be available from a very early age: children as young as ten months are able to solve problems by analogy, and by the age of three years analogical abilities are quite robust (Goswami, 1992, 2001; Gentner, 2003).

2.3 Analogical thought and tone painting

I would like to propose, then, that we hear the leaps of van Swieten’s tiger not by chance but because of our ability to draw analogies between sound sequences and movements (or, more generally, between disparate domains). To create a sonic analog for the energetic actions of this powerful animal Haydn carefully organized his musical materials to provide correlates for the distinctive features of such actions. The rapid upward strokes in the strings correlate with the continuous movement of a leap; the overall ascent in register and expansion of the interval spanned by the upward strokes (from a perfect fifth in bars 13–14 to an octave in bars 16–17) correlate with a succession of larger and more energetic leaps; the silences introduced by the notated rests correlate with the moments of repose that occur between such leaps; the forte dynamic and the sound produced by the massed strings correlate with the bulk and power of the animal; and the combination of a static harmonic field with the activity suggested by these other features correlate with the physical tension we might feel – frozen between a desire to flee and a fascination with the unusual – when suddenly confronted by a dangerous

1. The notion that fingers provide a “tapered end for guiding communication” reflects work by Michael Tomasello and others on the role of pointing – most typically, with individual fingers – in human communication. See Tomasello (2006) and (2008).

animal.² The music of Figure 2 is thus a skillful representation through sound of a complex phenomenon that has no significant sonic component, imaginative both in its production and reception. That is, Haydn had to be creative in his use of musical resources to summon the leaps of the tiger (because there was no established convention for representing such energetic actions), and listeners had to be creative in correlating a somewhat unusual succession of musical events with the activities of a remarkable beast.

Previous treatments of tone painting have typically focused on more or less compact images that are summoned by music – the image of a tiger, in the case of the music of Figure 2, or a spinning wheel, in the case of another favorite of musicologists, the piano accompaniment for Franz Schubert’s “Gretchen am Spinnrade” (“Gretchen at the Spinning Wheel,” D. 118). It would, however, be more accurate to say that in each case the music evokes a dynamic process rather than a static image: in Haydn’s *The Creation*, the leaps of the tiger; in Schubert’s “Gretchen,” the continual movement of the spinning wheel.³ Further examination shows that tone painting invariably involves the analogical correlation of a sequence of musical events with a dynamic process – that is, a sequence of phenomena distributed over time and typified by parametric modulation or change. Indeed, in other work I have proposed that sonic analogs for dynamic processes are basic to musical utterances, and used not only for the depiction of exceptional or unusual phenomena but also to represent emotions, gestures, and the patterned movements of dance (Zbikowski, 2017). Although linguistic expressions can make recourse to sonic analogs through onomatopoeia and prosody, the prevalence of sonic analogs in musical utterances points toward a species of meaning that is substantially different from that upon which language relies.

Two further points should be made about analogical thought and its relationship to musical understanding. First, analogies are typically made within a contextual framework: there are, for instance, any number of similarities between a pen and a finger – both are concrete objects, both can be found in domestic situations, both occur in a variety of colors – but in the example I offered above I

2. A further aspect of the music of Figure 2 is the physical action through which it is rendered in performance – that is, the successive bow strokes of the string players. There is some evidence that actions like these are, to a certain extent, encoded into the musical sound. See, for instance, Leman, 2008, Chapter 6, and Godøy, 2010.

3. It also bears mention that musical materials may bear more than one imagistic interpretation: in the case of Schubert’s “Gretchen am Spinnrade,” the distinctive accompaniment for the song – made up of repetitive sixteenth-note arpeggios that set out harmonic progressions which flit from key to key without ever settling down – can also be understood to represent Gretchen’s psychological tumult, and in particular her dysfunctional obsession with Faust. For further discussion see Zbikowski, 2009, pp. 367–369.

focused on only those features relevant to the process of human communication. The alignment of features and structure that typifies analogy is thus constrained by contextual goals that are distinct from the analogical process proper (Holyoak & Thagard, 1995, Chapter 1; Medin, Goldstone, & Gentner, 1993). It follows, then, that a listener who did not understand German or who was unable to follow the general plot of *The Creation* might not make a connection between the music of Figure 2 and the energetic actions of a powerful animal. The second point, related to the first and of moment for my overall argument, concerns the constraints a given sequence of musical events will impose on analogical interpretations. Although our hypothetical listener might not imagine the leaps of a tiger, given the structural features of the music shown in Figure 2 – the brusque upward strokes, the minimal melodic information, and all the rest – it would nonetheless be unlikely that she would imagine that the music is meant to evoke a lullaby or, for that matter, a pastoral setting. Successful analogies, whether musical or otherwise, are based on the correlation of elements and relationships between two different domains. Thus while a given sequence of musical events might admit of a range of analogical interpretations, the most successful of those interpretations will draw on extensive mappings between the elements and relations of the musical and non-musical domains.

Let me now return to the music of Figure 1 and to the two imaginary listeners I introduced in my discussion of how the passage might be understood. My first listener knew something about Classical music but had not been previously acquainted with Haydn's contribution to the repertoire. (It bears mention that this listener could have been one situated in the late eighteenth century as well as the early twenty-first, although in the former case she would have hardly called the music "Classical.") This listener understood the overall context for the tone painting that occurs in No. 21 from *The Creation*, and has already been taught by Haydn how behavior associated with the lion, tiger, stag, and horse might be inferred from short musical passages. Given her capacity for analogical thought (and a modicum of imagination) she is able to infer from the music of Figure 1 (and the sudden shift of key center that it enacts) that Haydn means to evoke an animal altogether different from those introduced up to this point, one imbued with a sense of grace evident not so much in its movement but in its fitness for its peaceful surroundings. Developing a characterization of the second listener's understanding of the passage – that is, the listener knowledgeable about musical conventions of the eighteenth century – is a somewhat more complicated endeavor. On the one hand, his understanding of most of the tone painting previous to the music of Figure 2 would be much the same as that of the first listener, given that the means through which Haydn represented the behavior of various animals has not exploited any particular musical conventions. (The one possible exception is

the representation of the horse which, if not exactly conventional, is quite similar to representations used by other composers; for a discussion, see Monelle, 2000, pp. 45–73.) On the other hand, the second listener’s recognition of the music of Figure 1 as a *siciliana*, and thus making reference to pastoral topics, opens up a rich network of connections that far exceeds anything set up by the analogical representations Haydn has used up to this point. I would like to propose that the activation of this network has the potential to move our listener’s understanding from the realm of analogy to the realm of conceptual metaphor. As I would like to explore in the following, much of this realm is the property of language, but I believe that Haydn’s evocation of a pastoral scene in *The Creation* also demonstrates the contributions music can make to conceptual understanding, not least because the sequences of sound materials deployed by composers offer a way to represent, in a compact and immediate form, a range of dynamic processes.

3. From musical analogy to musical metaphor

3.1 Analogy and metaphor

As already noted, researchers on analogy tend to view metaphors as a particular species of analogy (Gentner, Bowdle, Wolff, & Boronat, 2001; Holyoak, 2012). Dedre Gentner has offered perhaps the most persuasive account of this perspective, proposing that where analogy is focused primarily on relational structure, metaphor is focused primarily on attributes (Gentner, 1983; Gentner & Markman, 1997). Thus in a comparison between tires and running shoes, an analogy would correlate relations: tire is to car as shoe is to person. A metaphor (or, more properly, simile) such as “Tires are like running shoes” focuses on attributes: running shoes provide traction on uncertain surfaces, serve as a cushion against irregularities in the road, facilitate speed of locomotion, and wear out, all of which could be said – with a bit of imagination – of tires. Although there is much to be said for this approach (which has provided a useful framework for computational models) I prefer to view metaphor as activating and drawing upon rich networks of knowledge. Thus “Tires are like running shoes” activates tactile knowledge (“feeling the road” through the shoe or tire), ideas about species of locomotion (running is a competitive activity, which may also be true of driving), and agency (the driver is in control of the car, and the runner in control of her body), all of which embed the process of meaning construction within a broader context.

Making a sharper distinction between analogy and metaphor has two benefits for exploring how musical utterances contribute to the construction of meaning. First, the resources for reasoning provided by analogy offer a principled way to

explain how sound sequences of the sort shown in Figure 1 could be correlated with the behavior of and surroundings for a fairly large domestic animal, stopping short, however, of expectations that the music would specify much more than this. Put another way, music similar to that which Haydn used to evoke a pastoral scene could be pressed into service for other ends, ones in which any thought of the pastoral was put rather far into the background: this is, after all, music that is relaxed and soothing. It could even be used, within a religious context, to express love for the Almighty as a source of all that is good (as J. S. Bach indeed does in the second movement of his cantata “Ich liebe den Höchsten von ganzem Gemüte,” BWV 174; for further examples see Jung, 1980, pp. 201–205). Second, thinking of metaphors as activating and drawing upon rich networks of knowledge invites reflection on how such networks are organized, along with how nonlinguistic forms of communication like music can guide the paths we take through their branching structures. In what follows, I would like to explore two approaches to metaphorical knowledge exemplified by research on musical meaning. The first, which is generally called topic theory, connects with the field of semiotics, and the second with conceptual metaphor theory.

3.2 Musical topics and musical meaning

Musical topic theory had its modern origins in the work of the musicologist Leonard Ratner (1980), who proposed that composers of the late eighteenth century made use of a body of widely-shared and relatively specific musical figures to shape their compositional discourse – that is, musical topics. Ratner’s proposal was persuasive to a number of scholars, not least because it provided a way to draw together the diverse influences evident in the music of Josef Haydn, Wolfgang Amadeus Mozart, and their contemporaries – influences that ranged across national styles as well as the various uses to which music had been put – and to explain how a uniquely pellucid species of musical meaning was engendered.⁴ On the understanding developed by topic theorists, the vocabulary of topics was shared by both composers and listeners, and formed a basis for musical communication beyond the ordering principles of tonality and meter. The specificity of the figures was not limited to the configurations of pitches and rhythms that distinguished one topic from another but extended to the network of cultural associations activated by each topic.

Among the topics identified by Ratner was the pastoral: his rather minimal characterization frames it as a kind of rustic music associated with the droning

4. Representative work includes Agawu, 1991, 2009; Hatten, 1994, 2004; and Monelle, 2000, 2006. See also the contributions gathered together in Mirka (ed.) 2014.

sound of the bagpipe (1980, p. 21). Raymond Monelle, who was one of the guiding forces behind applications of linguistic and semiotic theory to music (Monelle, 1992), observed that, while Ratner's theory offered a secure framework for developing a theory of musical meaning, many of his characterizations of topics were rather too minimal and given limited support by eighteenth-century writers on music (Monelle, 2000, p. 33), characteristics evident in Ratner's rather compressed account of the pastoral. To correct this situation, Monelle suggested that each musical topic needed a full cultural study to capture the range and depth of its signification. In a later publication Monelle offered just this sort of study of three topics, one of which was the pastoral (2006). In an account that began with evocations of the pastoral in the writings of Theocritus and Virgil and that spanned nearly ninety pages, Monelle endeavored to sketch the extensive cultural heritage of the pastoral and its use to invoke not only the rusticity of the shepherd but also celestial realms inhabited by figures from myth and legend. This rich network of knowledge was accessed musically through the use of instruments associated with pastoral contexts (such as the bagpipes or the flute) and a discrete set of compositional strategies that emphasized simplicity and directness. The most common of these strategies, at least since early modern times, are those exemplified by Figure 1 and include the rhythmic figuration of the *siciliana*, a very simple harmonic plan, and a regularly-structured, singable melody. From Monelle's perspective, then, these features signified the pastoral, and would lead Haydn's listener not simply to an image of cows and sheep grazing but also to ideas about a lost Golden Age in which humans were in deep harmony with nature (Monelle, 2006, Chapter 12).

The account of musical meaning offered by topic theory, especially in a fully-ramified version of the sort offered by Monelle, provides one way to situate Haydn's evocation of the pastoral in *The Creation* – that is, as the use of a signifier that functions within a dense web of knowledge that stretches back to antiquity. That said, while an awareness of this network of knowledge has the potential to add much to our appreciation of musical topics, it can also take us far away from the immediacy that is a hallmark of musical communication. Put another way, once we begin to follow the various branching paths of this network the import of the original musical utterance fades into the background and our thought comes to be guided by language rather than music. The metaphorical expressions we might use to describe this music would then be drawn from the web of knowledge associated with the topic.⁵

Although the brief summary I provide here can give only a glimpse of what topic theory might offer for our understanding of how musical utterances can

5. For a similar perspective on the process of meaning construction associated with musical topics see Danuta Mirka's recent overview of musical topic theory (2014), especially pp. 30–32.

construct meaning, it should give a sense of the broader context within which Haydn's evocation of the pastoral was situated. Another way to view this context – and to gain a slightly different perspective on the contribution musical utterances make to meaning construction both without and within language – is through the lens of conceptual metaphor theory, with particular attention to the role embodied knowledge plays in shaping our thought processes.

3.3 Conceptual metaphor theory and music

3.3.1 *The metaphor of the pastoral*

One of the basic claims of conceptual metaphor theory, of course, is that there are consistent patterns of thought (that is, conceptual metaphors) that guide the production of linguistic expressions and, arguably, other modes of communication. With respect to the pastoral, however, it must be acknowledged at the outset that linguistic expressions that draw on ideas about shepherds or pastures filled with grazing animals are not very common in post-industrial first-world contexts. Although one can encounter idioms such as “I’m in clover” (meaning “I am in a very favorable situation”) and “gentle as a lamb,” on the whole expressions that evoke the pastoral are relatively rare. That said, images of lush green fields and peaceful animals are familiar enough to provide a ready basis for the construction of meaning. Consider, for instance, the first two verses of Psalm 23 of the Christian Bible in the King James version: “The Lord is my shepherd; I shall not want. He maketh me to lie down in green pastures: he leadeth me beside the still waters.” It seems likely that most individuals, upon reading these verses (which, of course, reflect a distant world in which pastoral scenes played a significant part), would understand that the deity is not literally a shepherd and that the pastures and waters described are figurative evocations of a protected, comforting environment. We might render the conceptual metaphor that frames such an understanding as PASTORAL SETTINGS ARE PLACES OF SAFETY AND SECURITY.

It bears mention that the pattern of thought that underlies this conceptual metaphor plays only a minor role in the account of the pastoral topic sketched by Monelle. Although notions of safety and security are certainly present (especially in connection with the pastoral as representing an idyll from which contemporary life is estranged) these at best formed a substrate for the complex of ideas built up around the topic. In the case of Haydn's use of the pastoral topic in *The Creation*, however, the design of the movement as a whole suggests that the activation of something like PASTORAL SETTINGS ARE PLACES OF SAFETY AND SECURITY was of central concern. Recall that the music of Figure 1 comes after a rapid succession of sonic analogs meant to evoke thrilling and dangerous animals; this tumultuous sequence is then abandoned through a sudden change of key, tempo, orchestration,

and rhythmic figuration. Having been buffeted by highly dramatic music, the listener is then suddenly placed in the midst of a domain in which cows and sheep might safely graze. Although this domain is one that the listener might certainly connect with idylls that include bucolic shepherds and lazing demigods, its main effect is simply to surround her with a sonic evocation of safety and security.

I believe a case can be made, then, that Haydn's music activates a conceptual metaphor that could provide a framework for a range of linguistic utterances associated with pastoral contexts. More importantly, however, Haydn's music offers a sonic analog for the sort of feelings that might be summoned were one to inhabit such a context. Were such feelings to become activated, the conceptual metaphor PASTORAL SETTINGS ARE PLACES OF SAFETY AND SECURITY would be one that is fully embodied: linguistic utterances based on this particular instantiation of the metaphor would thus be informed by embodied knowledge that has been activated by musical sounds.⁶ This possibility suggests that the contribution music makes to the construction of meaning is different from that of language in that music's primary focus is on dynamic processes with deep and immediate links to embodied experience. The conceptual metaphors activated by the sonic analogs created by sequences of musical sound are thus not simply grounded in embodied knowledge, but thoroughly imbued with that knowledge.

3.3.2 *Music and conceptual metaphors*

As a way to fill out the picture of the contribution musical utterances make to conceptual metaphors, let me shift the cultural and historical context from late eighteenth-century Europe to early twenty-first century India and the United Kingdom. Some fifteen years ago the ethnomusicologist Martin Clayton, in the course of a consideration of musical communication occasioned by the performance of a South Asian raga, described an informal experiment he conducted with a recording of the khyal singer Veena Sahasrabuddhe performing Shree raga (Clayton, 2005, pp. 365–372). As is typical within this performance tradition, Shree raga is regarded as having a marked character – in the case of Shree, one that is strong, calm, and powerful (although Clayton notes that the range of associations is rather broader than this simple sequence of adjectives might suggest). As a way of exploring whether there was a substantive basis for communication of the character associated with Shree raga through musical means, Clayton played a seven-minute excerpt from Ms. Sahasrabuddhe's performance for a range of

6. There is a wealth of research that indicates that music can indeed induce emotions, although the precise means by which this occurs, along with the nature of the emotions induced, is the subject of considerable debate. For a summary of research on music and emotion, along with one explanation for how emotions might be induced, see Zbikowski, 2010, pp. 39–48.

listeners, including individuals at the Indian Institute of Technology, Bombay (the IITB; some of these individuals were Ms. Sahasrabuddhe's students) and at the University of Cambridge Music Faculty. He provided listeners with a blank sheet of paper and asked them to note down any thoughts, feelings, images, or associations that came to mind, responding with words and drawings as they thought appropriate. As might be expected, the responses of the listeners were quite varied. From one listener at the IITB, "It gives the feeling of the Sun rising"; from another, "A quiet evening; peace and repose descend." From one listener at Cambridge, "Sailing slowly down a river in hot, humid weather at dusk"; from another, "Seems somehow to hold back, like having anxiety or other emotions that are not let out, but held in" (2005, pp. 370–371). What Clayton found remarkable, however, was that despite considerable variation among the listeners' responses there was nonetheless an overall conformance with the general characteristics traditionally associated with the Shree raga – this despite the fact that some of the listeners had no knowledge of that tradition. As Clayton observed in his summation, "in all the responses there is no mention of anger, jealousy, fear, doubt, disappointment, unrestrained joy, rapid, mechanical or graceless movement, dancing, or any kind of social meeting or relationship (2005, p. 372)."

Again, Clayton offered this informal study to demonstrate musical communication that is effected through the performance of a raga. That said, his study also demonstrates two contributions music can make to conceptual metaphors. First, music can prepare the groundwork for conceptual metaphors: Ms. Sahasrabuddhe's performance activated concepts and emotions that listeners connected with the sun, evening, a river flowing, and restraint, each of which could be linked to specific conceptual metaphors. Second, all of the images put into play had a dynamic component – the sun *rising*, peace and repose *descending*, *sailing* down a river, *holding back* emotions – that was connected with embodied experience. There are nonetheless two important caveats to add. First, music guided listeners' thought processes in only a general way: although, as Clayton noted, certain ideas never made an appearance in listeners' responses, those that did varied widely. The accounts of the ideas put into circulation by music, then, seem closer to those that might be prompted by poetry than to those that would be prompted by the narration of a simple story. Second, we lack a sense of what listeners did with concepts once they had been activated by music. Did, for instance, the sun or evening become central to a conceptual metaphor that guided a listener's thought processes, or were these subsidiary concepts that did no significant work in the flow of ideas set in motion by Ms. Sahasrabuddhe's performance? These caveats notwithstanding, Clayton's study would seem to indicate that musical communication was indeed accomplished by Ms. Sahasrabuddhe's performance of Shree

raga, and that listeners were able to use sequences of musical sounds as the basis for the construction of meaning with a strongly metaphorical component.

3.3.3 Summary

As I hope to have shown, there is a range of evidence – from examples of tone painting such as those found in *The Creation*, to anecdotal accounts such as that offered by Clayton in his study of musical communication – that sequences of musical sounds can make significant contributions to the conceptual metaphors through which humans guide their thinking. These contributions are of a general sort – involving rich, embodied images rather than crisp concepts – but what they lack in specificity they make up in immediacy.

It seems apparent that hearing sequences of nonlinguistic patterned sound as representing anything – be it the leaps of a tiger, a pastoral scene, images of the sun rising, or the sensation of floating down a river – is a highly imaginative act. I would like to propose that such acts are also creative, in the sense that the sequence of sounds in each of these cases is not a simple or straightforward imitation of natural sounds, and that hearing the sounds as referring to relatively concrete images and sensations has a particular kind of value for humans (such that every human culture of which we have knowledge has something like music). That said, I believe that these uses of musical sound are also shaped by the goals of communication: were a musician to propose that the music of Figure 1 was an adequate representation of a fierce and threatening animal I would hold that she was in error: the sonic analogs created by that musical passage simply do not have enough (or, indeed, any) correspondences with the features we associate with fierce and threatening animals. Our creative imagination is thus constrained by the way sequences of sounds are organized, a constraint also evident in the characteristics listeners did *not* associate with Ms. Sahasrabuddhe's performance of Shree raga. And so while the experience of hearing a sequence of nonlinguistic patterned sound may be an opportunity for a creative act, our creativity will be limited by the specific features of how that sound is organized and the context within which the sequence is intended to function. The creative opportunity may be extensive, but it is not unbounded.

4. Music and Metonymy

As I noted in my introductory observations, part-whole relationships are very common in music. This owes much to a distinctive feature of many musical utterances, which is that they constitute integrated wholes that are often reinforced, whole or in part, through repetition. Popular song is a good example: such songs

are typically saturated with repetition, and in the case of those we have listened to a number of times any one of these repeated fragments, heard in isolation, is enough to prompt a recollection of the song as a whole.⁷ Fragments like these thus serve as metonyms for the song; where the song is part of a beloved collection (for instance, a favorite release by one of the singers we follow), it may in turn serve as a metonym for an entire album.

Despite the ubiquity of part-whole relations in musical utterances (and a broader interest in conceptual metaphor from music scholars) I know of only two studies that engage with the phenomenon from the perspective provided by research in cognitive linguistics, both doctoral dissertations (Kemler, 2001; Chuck, 2004). I suspect this is so not because part-whole relations in music are unremarkable as it is because the advantages of studying these relations within the context of the conceptual processes associated with metonymy have not been fully appreciated.

To some extent, the issue of metonymic relationships in music can be approached in terms of processes of categorization (Lakoff, 1987, Chapter 4), which can be seen to operate both within musical utterances and when musical utterances connect with other domains. With respect to the former, a distinctive musical motive can, in some cases, summon a much larger complex of musical materials. One of the most familiar examples is provided by the opening of Ludwig van Beethoven's *Fifth Symphony*: the familiar DA-DA-DA-DUM! with which it opens almost immediately evokes a category of similar motives within the first movement of the symphony (of which the first version is an exemplar), and the theme as a whole (of which the motive is one component; for further discussion of how processes of categorization may guide our apprehension of the opening of the *Fifth Symphony* see Zbikowski, 2002, pp. 34–49). The opening motto of the symphony thus serves as a part which guides the understanding through its connection to the larger whole (the category of motives of which it is a part, the theme in its entirety, and finally the superordinate category of the first movement as a whole). With respect to musical utterances that connect to other domains, the passage from No. 21 from Haydn's *The Creation* with which I started again provides an example: the peaceful sonic domain evoked by Haydn can be seen to be metonymic for a notion of the pastoral of the sort set out by Monelle in his comprehensive study, such domains being understood to be a part of the larger category comprehended by the pastoral.

Musical metonymy can, however, be somewhat more complex than this, as one further musical excerpt will show. Among the most famous examples of works with connections to pastoral topics within the repertoire of Western classical music

7. For a fuller discussion of the role of repetition in music see Margulis, 2014.

is a composition that was premiered on the same concert as his *Fifth Symphony*, the *Pastoral Symphony* (which is Beethoven's sixth symphony in the traditional numbering of the works). Beethoven not only gave the symphony the descriptive title, he also provided each of the symphony's five movements with a brief motto. For the first movement, "Awakening of happy feelings on arrival in the countryside"; for the second, "Scene by the brook"; for the third, "Merry gathering of the country people"; for the fourth, "Storm"; and for the fifth, "Shepherds' song. Joyful, grateful feelings after the storm." There have been extensive discussions of the various ways Beethoven's music evokes the pastoral (Jones, 1995; Will, 2002, Chapter 4; Monelle, 2006, pp. 242–245), and each of these could be seen (as was Haydn's) as metonymic for the pastoral as a whole. I would, however, like to focus on a moment at the end of the second movement that provides a somewhat fuller sense of how metonymy may function in musical contexts.

The moment comes just as Beethoven is bringing the movement to a close (a section known as the coda). Having accounted for all of his tonal, thematic, and motivic materials, he suddenly introduces three small, but quite prominent, bits of new material; the final bars of the movement, in an arrangement for piano four hands, are shown in Figure 3. Beethoven identified these as representing the nightingale (played solo flute), quail (solo oboe), and cuckoo (two clarinets). Before considering the metonymic aspects of these interjections, two aspects of them should be noted. First, while these woodwind instruments offer reasonable approximations of the sound of each of these birds, what the listener hears is nonetheless an artful representation of birdsong rather than its exact imitation. Second (and as pointed out by David Wyn Jones), the emergence of the woodwinds at this point is to some extent prepared by the solistic roles they have played earlier in the movement (Jones, 1995, pp. 66–67), roles in which the imitation of birdsong played no part.

With respect to metonymy (and to some extent signaled by Beethoven's captions), the sounds played by the woodwinds act as trajectors (in Langacker's terms) or vehicles (in Kövecses and Radden's terms) that carry thought toward the birds with which they are associated. Because not one but three birds are evoked by Beethoven's music, the interplay of these sounds also suggest that the birds all occupy approximately the same physical space; because each of the calls is set out in a deliberate way and repeated with no variation, there is also a sense that the imaginary birds are roosting or at least relatively motionless. These various possibilities point to one of the remarkable things about musical utterances in general – exploited here in a singular way by Beethoven's musical metonymy – which is that they have the potential to summon a rich, dynamic conceptual tableau through the interaction of different layers of musical sound.

128 Nightingale [solo flute] *p cresc.*

sf

130 Quail [solo oboe] *tr* *dim.*

Cuckoo [clarinets] *p* *p*

133 (Nightingale) *cresc.* (Quail) (Cuckoo)



Figure 3. Ludwig van Beethoven, *Pastoral Symphony*, second movement, bars 128–139; arrangement for piano four hands

Of course, the sonic analogs for the different birdcalls also connect with the topic of the pastoral (a connection that would be thoroughly natural within the context of Beethoven's symphony). This connection is common enough that Monelle reckoned birdcalls to be a subtopic of the pastoral genre (Monelle, 2006, pp. 235–236). A case could be made, however, that the connection is a relatively tenuous one: there is a long tradition of imitating birdcalls with music (Leach, 2007, Chapter 3), and as such the connection may simply be to a natural scene of some sort rather than a full-fledged pastoral scenario.

Perhaps the most interesting metonymic connection forged by the interjection of the birdcalls into the end of the second movement of the *Pastoral Symphony* operates within a somewhat more technical context. In the practice of instrumental music of late-eighteenth and early-nineteenth-century Europe it is quite unusual to introduce new material in the last moments of a movement – indeed, Beethoven only brought the birdcalls into the movement at a late stage in his compositional process (Jones, 1995, p. 67). As such, then, the sudden appearance of the birdcalls can be heard as a metonym for sounds that are *extra-musical*, summoning world of sonic phenomena that exists outside the orderly world of symphonic music.

Quite a bit more might be said about musical metonymy, not least because, as these last observations suggest, much depends on the way compositional strategies are used to draw attention to part-whole relationships. Of some importance for research on metonymy – but presenting a considerable barrier to scholars less familiar with the intricacies of musical organization – at least some of the metonymic relationships that are realized in music will involve *only* musical materials, and will thus have their proper home in a domain within which language is at best an awkward intruder. Our assessment of creativity in such domains may, in consequence, stretch to the limits of our ability to imagine and to capture meaning that proceeds in ways that are largely independent of the conceptual resources offered by language.

5. Creativity in and around musical utterances

In the introduction to this chapter I took the view that thinking *in* music was an activity distinct from thinking *about* music. The latter process is one that is typically facilitated through language, whereas the former is one difficult to capture with the resources language offers. Indeed, I likened being able to think in music to being able to make immediate sense of a sentence transformed into sine-wave speech: in both cases, what is to one listener a seemingly random sequence of sounds is to another a thoroughly intelligible and meaningful utterance. I further proposed that, in the case of music, the reason for this state of affairs was that music did not, for the most part, rely on standard conventions through which a sequence of sounds was associated with a particular unit of meaning but instead offered sonic analogs for different sorts of dynamic processes (a perspective developed more fully in Zbikowski, 2017). Musical meaning construction is, in consequence, an inherently creative task, one in which musical passages are heard to connect not only with other musical passages but also with a wide range of extra-musical phenomena.

According to this perspective, the meaning we make through listening to music always has some measure of novelty. Whether this listening also has value – another component in the notion of creativity pursued in this volume – is another matter. In this connection, it bears mention that musical interactions are always, to some extent, social interactions, involving as they do composers, improvisers, performers, and audience members. (While it is certainly the case that the practice of listening to a musical recording in isolation from others challenges this notion of social interaction, I would argue that it still frames and conditions the apprehension of musical meaning.) In a recent consideration of creativity (framed in terms of the notion of the agile mind) Tony Veale, Kurt Feyaerts, and Charles

Forceville noted the importance of such social interactions to the construction of meaning in creative contexts, writing

we are not individuals working alone in front of an audience, but collaborators working together to arrive at a shared state of mutual understanding. As such, every successful act of mental agility in a social context must be reciprocated with a corresponding agile turn by our intended audience. In this respect, it is helpful to think of social interaction as a dance, in which our mundane, everyday interactions are highly-choreographed affairs. (Veale, Feyaerts, & Forceville, 2013, p. 27)

The key word here is “successful”: as I have noted, it may well occur that, in at least some cases, a musical utterance fails to achieve its purpose. While there still may be novelty in interpreting that utterance, if the audience cannot respond to it with “a corresponding agile turn” its value will be deprecated to the point of becoming negligible.

A further factor may be the amount and kind of imagination required of listeners. In some cases (as with Beethoven’s evocation of various woodland birds) a sonic analog will have so much fidelity to the phenomenon to which it refers that its interpretation will be seemingly effortless. In other cases, as in Haydn’s use of a pastoral topic in No. 21 from *The Creation*, the full interpretation of a sonic analog may require additional knowledge of the sort assumed by musical topic theory. On the one hand, the latter case may connect musical listening to a rich web of signification of the sort explored by Monelle in his account of the pastoral, a connection that would no doubt inflect the metaphorical knowledge activated by the musical passage. On the other hand, the immediacy of Beethoven’s sonic analogs for birdsong might well allow the listener to remain a bit longer within the domain of music, and to entertain conceptual metaphors more directly connected with the embodied dynamic processes to which sequences of musical sounds give access.

As others have noted, there is now a considerable body of research which demonstrates that the process of mapping knowledge from one domain to another – a process in evidence in analogy, metaphor, and metonymy – is a distinctive aspect of human thought and contributes much to the mental agility that marks human creativity. Inasmuch as musical practice is a distinctively human enterprise, it seems likely that cross-domain mapping would inform the thought processes that guide this practice and that are reflected in the creative uses to which sequences of patterned nonlinguistic sound are put. And, to the extent that musical communication is *not* like linguistic communication – that is, to the extent it offers unique resources for the expression of thought – it also seems reasonable to expect that music can tell us much about the way processes of cross-domain mapping are deployed for the purposes of constructing meaning, and how music contributes to and demonstrates human creativity.

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Singing for peace

Metaphor and creativity in the lyrics and performances of three songs by U2

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This chapter explores how metaphoric creativity contributes to shaping and recontextualizing ideological and socio-political practices in three songs by U2, “Sunday, Bloody Sunday”, “Please” and “Peace on Earth”. The contextual motivations of metaphoric creativity are analyzed by exploring three main dimensions. Metaphoric creativity is analyzed, first, in the conceptualization of the topic of conflict in Northern Ireland in the lyrics of the three songs. Second, it is analyzed as hinging upon the multimodal interaction of verbal and visual modes in the performance of the song “Please” in a YouTube video. Third, we explore the potentiality for creative recontextualization of the songs, which have been performed to reinterpret other political conflicts and tragic events, starting from the 9/11 attacks.

Keywords: creativity, metaphor, performance, recontextualization, songs

1. Introduction

The present chapter discusses some of the motivations of metaphoric creativity in three songs by U2 by exploring how metaphor is used (1) to conceptualize the topic of the Northern Irish conflict during the period known as “The Troubles” and related sub-topics, such as the peace process and emotions in the lyrics of three songs, (2) to create a multimodal interpretation of “Please” as shown in the performance in the official videoclip released by the band and, (3) to account for the creative recontextualization of the songs in performances after the 9/11 attacks in New York.

Songs are an interesting genre for the study of creativity as social practice because of their potential for social critique and their strong persuasive and emotional appeal, in addition to their entertaining function. Metaphors in songs, like in other

genres such as politics or media discourse, play crucial roles both in the shaping of ideologies and in the potential to invoke emotions and action in audiences.

The present study contributes to previous research on metaphor in songs (see, for example, Steen, 2002; Kövecses, 2002; Filardo-Llamas, 2017) by focusing on the processes of creative contextualization and recontextualization across modes and performances, an aspect which has not received sufficient attention so far. Our approach to metaphoric creativity draws from studies of contextually-driven metaphoric creativity (Kövecses, 2010, 2015; Hidalgo Downing, 2015), (multimodal) creativity as discursive and social practice (Carter, 2004; Forceville & Urios-Aparisi, 2009; Jones, 2012, 2016; Maybin, 2016) and critical approaches to metaphor analysis (Charteris-Black, 2004; Musolff, 2004; Hart, 2008). Our study falls within the tradition of research on metaphoric creativity as product rather than as process. That is, we focus on the way certain meanings can be observed by examining the occurrence and choice of metaphors in the songs, rather than by focusing on the way the songs were created by the band. However, we will complement our analysis with references to testimonies by the band when designing and performing the songs, in an attempt to establish connections between the meanings we deduce as analysts of the songs and the intentions of the band when creating the songs, together with the adaptations of the songs in specific performances after 9/11. In this way, our aim is to intersect some of the aspects involved in the analysis of creativity as process with our own analysis of the songs as creative products.

The complexity of the creative process in songs is represented in Figure 1, which shows the interaction between the creators' motivations and intentions, the discursive construction of metaphoric creativity in the songs and the creative adaptation of the songs in performances. As explained above, our study focuses

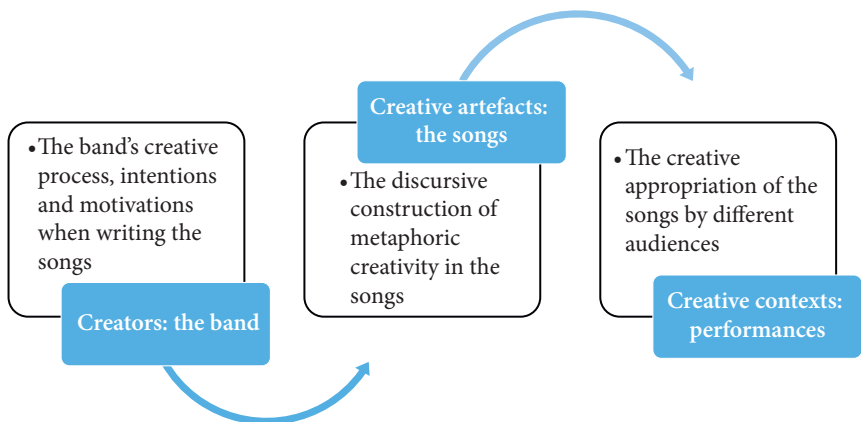


Figure 1. Creativity in songs

on the central dimension, the analysis of songs as creative artefacts, but we also discuss some relevant aspects of the two other dimensions, the band's motivations when writing and performing the songs and the creative appropriation of the songs by audiences in different performances.

The songs we examine are "Sunday, Bloody Sunday" (1983), "Please" (1997), and "Peace on Earth" (2001), three well known songs by the Irish rock band U2. These three songs have been chosen not only because they are produced by the same group – thus ideally retaining similar stylistic traits – but also because they originally reacted to different events which took place during the conflict in Northern Ireland, and were subsequently adapted to reinterpret other conflicts. As we will see in the analysis below, the originally localized and individualized meaning of each of the songs has gradually acquired multiple and more universal understandings, especially after the 9/11 terrorist attacks, thus revealing a shift from an impact of local contexts to global contexts. Metaphors and their role in construing a given interpretation of reality (Charteris-Black, 2004) play a crucial role in this process.

In addition to analyzing the lyrics of the songs, we discuss the contextualization of metaphors and metonymies in a videoclip of "Please" and the recontextualization of the three songs across performances. Only the videoclip for "Please" is analyzed because it is the only official one released by the band. This is done with the aim of discussing the relation between metaphorical creativity and the multimodal interaction between the verbal and visual modes. For reasons of space, we do not address other additional modes such as the aural one. Recontextualization across live performances is explained by looking at how the songs were performed in the US *Elevation* tour following the 9/11 attacks.

The chapter is organized as follows. Section 2 introduces the background to the three songs by U2 under analysis and their performances across contexts, together with testimonies by the band on their motivations when creating and performing the songs. Section 3 provides an overview of recent scholarly research on metaphorical creativity and its relevance to the study of songs and of discourse as a social practice. Section 4 presents the analysis of the metaphors in the lyrics of the songs, section 5 the analysis in the video performance of "Please", and section 6 the analysis in the recontextualization of the metaphors across contexts and performances. The chapter closes with a section on conclusions and a list of references.

2. The Northern Irish conflict, U2, the three songs and their performance across contexts

Numerous songs have been written – or used – to respond to events of the Northern Irish conflict (Pietzonka, 2008) and also to the 9/11 terrorist attacks in New York.

The songs analyzed in this chapter were originally produced to respond to different events in the conflict in Northern Ireland. They were, however, not rebel songs, nor were they aimed at supporting any of the sides involved in the conflict. Rather, they were songs for peace, as claimed by the band (Snow, 2014, p. 52). It is arguably this claim for peace which underlies the three songs that allows the recontextualization of the songs in the aftermath of the 9/11 terrorist attacks.

The Northern Irish conflict has often been presented as arising from the confrontation between the Nationalist/Catholic and the Unionist/Protestant communities,¹ and it is usually identified with the 30-year period commonly referred to as “The Troubles”. Two of the songs analyzed in this chapter, “Sunday, Bloody Sunday” and “Peace on Earth”, were composed as reactions to two specific events which are critical reference points in “The Troubles”: Bloody Sunday (30 January 1972) and the Omagh bombing (15 August 1998). Their role as the beginning and end of this 30-year period can also help us explain U2’s growing tiredness and sickness with the conflict, and their evolution from earlier conflict-centered songs to later ones which focus on the existence of evil as the main force causing conflict. In the words of the band, when “Peace on Earth” was written as a reaction to the Omagh bombing, they showed their “disbelief” because that attack was “not only the destruction of so many lives, it seemed it was a destruction of the peace process” (McCormick, 2005, p. 286)

“Sunday, Bloody Sunday” was first included in U2’s album *War* (1983), and it is the bands’ reaction to Bloody Sunday, an event which marked the escalation of violence which had started in Northern Ireland during the late sixties. In this incident, thirteen unarmed civilians were shot dead, allegedly at the hands of The British Parachute Regiment, after a Civil Rights march in 1972 in (London)Derry. This event increased hostility towards the British army and promoted the support towards the IRA. This increase in the support of the IRA is probably the reason why Bono chose to express openly the band’s anti-terrorist views in their performances of Bloody Sunday, a song which he introduced with the words, “This is not a rebel song. This song is Sunday, Bloody Sunday.” A similar message can be observed in his waving a white flag during the mid-song instrumental solo at concerts instead of the Irish tri-color or the Union Jack. The white flag not only

1. In the account of the Northern Irish conflict presented here, the distinctions and subtleties inherent in the description of the Northern Irish communities have been simplified. This simplification will not influence the research carried out here, particularly if we take into account that U2 are originally from Dublin (and hence from the Republic of Ireland). Full explanations of the Northern Irish conflict can be found in Hennessey (1997), Bew & Gillespie (1999), or McKittrick & McVea (2001).

symbolized peace, but also U2's attempt to avoid taking sides in the Northern Irish conflict (Benito García, 2013).

The use of the white flag, according to the band, became "a big feature of the tour", and it was understood as a "beautiful symbol with a connection to the album" entitled *War* (McCormick, 2005, p. 135). The white flag, as a symbol for peace, together with the "military drum beat" in the song recall "the marching band influence", a band that is "militant for peace". This militant feeling was particularly important in the on-stage performance, as explained by Bono: "Militant for peace was our idea, hence the boots and the quasi-military garb – aggressive non-violence. We weren't really seeing it as any kind of crusade" (McCormick, 2005, p. 139). "Sunday, Bloody Sunday" can thus be understood as a song that cries for peace in the context of a conflict to which violence is obviously not providing as solution (Snow, 2014, p. 52–53).

The efforts to put an end to the conflict were successful when a Peace Agreement, also known as the Belfast/Good Friday Agreement, was signed in April 1998. At the same time, an IRA ceasefire was called. Both the agreement and the ceasefire were opposed by the Real IRA, a formation splitting from the Provisional IRA, which was responsible for the car bombing in Omagh on 15 August 1998. Twenty-nine persons died in the attack and two hundred and twenty were injured. This incident caused national and international outrage. As described by Bono, the country's reaction was one of "disbelief" and of being "in deep shock"; "There were no words you could say. [...] It was really a trauma for the entire nation, because not only was it the destruction of so many lives, it seemed it was a destruction of the peace process" (McCormick, Neil. 2005, p. 286). The song "Peace on Earth", which can be found in the album *All you can't leave behind*, released in 2000, tries to capture that feeling, and Bono's crisis of faith at the time. This is why this song is described by the band as being "as bitter and as angry a song as U2 have ever written" (McCormick, 2005, p. 286). These feelings result in a song which focuses not so much on a description of violent conflict, but rather asks why peace does not exist on earth. The questioning of the possibility of peace on earth is further emphasized after 9/11, when the opening lines in the first stanza are changed: Instead of singing "I'm sick of hearing again and again / that there's *ever* gonna be peace on Earth," the temporal adverb "ever" becomes "never" (McCormick, 2005, p. 299).

As mentioned by the band, the songs can easily acquire new meanings. The Edge describes his reaction as one of "surprise" when they realized that after 9/11 some of the themes in "Peace on Earth" were "so strong", and they evoked a "certain sense of morality, of trying to cope with loss" (Vagacs, 2005, p. 15).

Violence and conflict are also defining features of the terrorist attacks against the Twin Towers in New York on 11 September 2001, where 2,977 died (CNN,

2016). Although still focused on the idea of conflict, the reinterpretation of the three songs in the aftermath of the 9/11 attack is an example of American society's attempt to cope with and narrate the event which left the country in shock, exemplified in the erection of memorials and in the broadcast of tributes to the victims. "Sunday, Bloody Sunday" was allegedly included in a list of songs which circulated in radio and television programs and which were deemed lyrically questionable to be played after the 9/11 attacks (Melnick, 2009). However, the song was performed in all the concerts of U2's North-American leg of the *Elevation tour*, which started one month after 9/11 and continued till December. Although the band considered cancelling the first concert in October 2001, they finally decided to perform and Bono appeared on stage wrapped in the North American flag. "Please" was also one of the songs played by U2 in the North-American leg of the *Elevation tour*. Significantly, the song has not been played in full since the last show of this tour, because, as mentioned above, the band found it impossible to perform because of the emotional load it acquired. The first verses of "Peace on Earth" were used by U2 in their live performance at the benefit concert "America: A tribute to the heroes" ten days after the attack (Francis, 2009). Likewise, several videos can be found on YouTube where "Peace on Earth" is used to remember those who died in the 9/11 terrorist attacks.

The constant search for peace by U2 in their songs is thus easily re-contextualized in the three songs, with the contextually-bound criticism of terrorism in "Sunday, Bloody Sunday" acquiring a new meaning when referring to the 9/11 terrorist attacks. The plea for peace in "Please" acquires a heavier emotional load, as it is not only ideas and values related to each of the communities involved in the Northern Irish conflict that are criticized, but any value and idea which may be used to justify any conflict. Likewise, the possibility of the existence of peace seems more unreal when the band changes the lyrics in "Peace on Earth" and stresses the bitterness of the song. These songs illustrate how Bono's, or U2's, lyrics are adaptable "to any particular situation" (Vagacs, 2005, p. 15), and can be used to explain how and why U2 can be described as "poets for turbulent times" (Vagacs, 2005, p. 1-15).

U2's view on the conflict can also be seen in "Please", which was released as part of the album *Pop* in 1997. The reference to the Northern Irish Troubles can be clearly seen in the original cover of the single, which includes a photograph of the four main Northern Irish politicians at the time: Gerry Adams, David Trimble, John Hume and Ian Paisley. These politicians had been involved in a number of endless political talks during the long period of violence which followed Bloody Sunday. The plea in the title and the song, however, is not only to be understood as being addressed at these politicians, but also at those people who were sympathetic of paramilitary groups. In Bono's words: "Please' was written with somebody in

mind, who shall remain nameless. [...] It's not an exact portrait, it's a certain kind of person you'd meet in middle-class Dublin suburbs, who are very sympathetic to the IRA paramilitaries and provide the intellectual support base for militant Republicanism. It's people who think ideas are more valuable than other people" (McCormick, 2005, p. 269).

This emphasis on ideas, and not on locations, can also be observed in the video, which is shot at an unidentifiable location called "No name," where a number of participants are involved in different violent actions and are begged to stop. The focus on ideas and violence, and the constant and repeated plea by Bono's solo voice can help us understand why it is described by the band as "a song about terror," which "after 9/11 became impossible to sing" (McCormick, 2005, p. 269).

"Peace on Earth" can be found in *All you can't leave behind*, released in 2000. Although the song was originally a reaction to the Omagh bombing in Northern Ireland, it was later used as an encore song coupled with "Walk on" when U2 participated live in the telethon *America: A tribute to heroes*, after 9/11. A double re-contextualization takes place in this performance. First, being used as an introduction to another song, it loses its complete-song status and is only used as a way of framing another song. Second, as observed above, a change can be observed in the lyrics of the first stanza. While in the recorded version released in 2000, U2 sang "I'm sick of hearing again and again / that there's ever gonna be peace on Earth," in the telethon version ever becomes "never" and the possibility of peace existing becomes even more unreal.

3. Metaphor and creativity as social practice in songs

In our study we draw on recent research in discourse approaches to multimodal metaphor and to critical metaphor analysis (Cameron & Maslen, 2010; Charteris-Black, 2004; Fairclough, 2005; Forceville & Urios-Aparisi, 2009; Hart, 2008; Musolff, 2004; Semino & Demjén, 2016, among others) and context-motivated metaphoric creativity and creativity as social practice (Carter, 2004; Gibbs, 1994, 2017; Jones, 2012, 2015; Kövecses, 2010, 2015).

3.1 Metaphor and creativity in pop-rock songs: From discursive to social practices

Recent approaches to creativity in discourse analysis (Jones, 2012, 2015) have argued that creativity cannot be located in specific linguistic expressions per se, but, rather, in the contextual acts and socio-cultural practices in which language is used. This view of discursive creativity is consonant with the view of discourse

as situated in genre practices (Forceville, 2009; Caballero, 2014) and in critical discourse practices (Charteris-Black, 2004; Musolff, 2004). From this perspective, pop songs as a genre are creative discursive and socio-cultural practices which numerous artists use as a medium in order to question and challenge established social orders and to carry out social critique (Machin, 2010; van Leeuwen, 2012). This approach to the communicative function of songs reflects the view of artists such as the members of the band U2, who are known as “a band with a message.” (Cogan, 2008). Indeed, their message tends to be of a political nature, and multiple examples can be found of the band publicly supporting given political views in their concerts. The last example of this has been seen in the use of a video showing a number of political protesters in different socio-political situations at the beginning of the concerts in the *Experience + Innocence* tour.

A view of creativity as discursive and social practice (Jones, 2012, 2015) allows us to examine creativity in the songs by U2 as found not only in the lyrics as textual artefacts, but also in the way in which the songs become a site for the negotiation, modification and challenging of assumptions regarding a particular topic, that of conflict, together with the plea for peace, and a means for evoking emotions and invoking actions in the audience.

It can be argued that metaphor plays a crucial role in the expression of creativity as outlined above, for several reasons. First, metaphor is a natural mechanism for creativity, in that it allows us to think and talk about one thing in terms of something else, thus having the potentiality to invoke unusual associations between concepts (Semino & Demjén, 2016, p. 1). More specifically, the type of metaphoric creativity we examine in the songs by U2 is contextually motivated (Kövecses, 2010, 2015), though we argue that it operates by means of the interaction with embodied metaphors. Kövecses argues that “variation in metaphorical conceptualization is directly related to metaphorical creativity” (2010, p. 666) and that when speakers conceptualize ideas metaphorically “they do so under the pressure of coherence: the pressure of their bodily experience and the pressure of the context that surrounds them” (2010, p. 666). Kövecses further argues that while conceptualization of the former type takes place by means of embodied metaphors, which are linked to image schemas, emotions and physical experience and have a tendency to universality, the latter type takes place by means of context-triggered metaphors, which are typically complex metaphors (2010, p. 666). We argue that metaphorical creativity, which arises in recontextualization processes such as the ones we analyze in the U2 songs, takes place by means of the interaction between embodied metaphors and contextually-triggered metaphors. As we explain in the analysis below, the possibility of appealing both to universal embodied experiences of physical orientation, of action and of emotion, and

to contextually-variable culturally-based metaphors enables the appropriation process of recontextualization at two complementary levels.

Second, as we observe in the songs we analyze, metaphor in discourse occurs in various patterns such as repetition, combination and extension, which foreground the creative potentiality of the individual conceptual metaphors when occurring in actual discourse. Third, metaphor is a discursive and cognitive resource for the expression of ideological and evaluative meaning and, additionally, it is a framing mechanism that provides a particular perspective on an issue, in our case, the topic of conflict. Fourth, metaphor has a powerful persuasive potential, in its capacity to evoke vivid scenarios which demand the receiver to engage emotionally and to take action on a particular issue.

In the present chapter we analyze monomodal verbal metaphors in the lyrics of three songs by U2 and visual and multimodal (verbo-visual) metaphors in the video of the song “Please”. Following Forceville (2009, pp. 23–24), we consider monomodal verbal metaphors and metonymies those which are manifested exclusively in the verbal mode, while multimodal verbo-visual metaphors and metonymies are those whose targets and/or sources are manifested in both semiotic modes.

While metaphors involve cross-domain mapping, metonymies are characterized by within-domain mapping. As has been pointed out in the literature (Barcelona, 2000; Hidalgo-Downing & Kraljevic-Mujic, 2011; Urios-Aparisi, 2009), numerous metaphors are enabled by metonymies and metonymic chains, which contribute to the process of highlighting and hiding specific features of topics. The analysis of the video allows us to explore an interpretation of the song, specifically by identifying visual cues which function as source domains for the metaphors and help fix the potential meaning of the verbal mode.

3.2 Metaphor and political action

The crucial role of metaphor in a critical approach to discourse analysis has to do with its potential to express evaluations, to shape persuasive practices and to invoke emotional responses. As argued by Charteris-Black (2004, p. 38), the evaluative and persuasive potential of metaphor contributes to embedding ideology in texts, which is communicated verbally in order to justify political actions. The justification of political action hinges upon the triggering of emotional responses and is thus a form of verbal action (Lakoff & Johnson, 1980). It may be argued that metaphor in U2’s songs carries out a similar pragmatic function, given the critical stance of the band towards the themes they choose.

In the present chapter, we explore metaphors that are used to represent the Northern Irish conflict and the negotiations of peace. Relevant source domains for the analysis of conflict as a theme in the songs are WAR, JOURNEY and RELIGION,

source domains which are typically used in political discourse to conceptualize the topic of politics (Charteris-Black, 2004). Although the songs by U2 are obviously not political discourses as a genre, because of the prominence of the political themes touched upon in the songs, we argue that some of the main metaphors which are found in political discourse are also present in the songs in order to conceptualize the topic of conflict. Some of the main metaphors identified by Charteris-Black (2004) in his analysis of a corpus of political discourse are particularly relevant for our study. Charteris-Black (2004) argues that his data show evidence of the presence of various conceptual metaphors which make use of these sources, namely *POLITICS IS CONFLICT/WAR*, *POLITICS IS RELIGION* and *PURPOSEFUL SOCIAL ACTIVITY IS TRAVELLING ALONG A PATH TOWARDS A DESTINATION*.

The activation of the *WAR* source domain triggers at the same time a war script with the associated sequence of actions contained in the script (the event which triggers the war, the declaration of war, the call to arms, the armed conflict, the results of the war, casualties, occupied territories, the winning or losing of the war, or the surrender) (Charteris-Black, 2004, p. 92). The *WAR* source domain also activates frame or schematic knowledge regarding the entities and locations involved in the concept, such as the victims, the two opposed factions, the locations of the conflict, etc.

At this point it is relevant to mention that the polarization of entities involved in the metaphorical schematization of conflict is ideologically construed as an opposition between “us” and “them” (van Dijk, 1998; van Leeuwen, 2008). The polarization of factions in a conflict allows for the ideological evaluation of the parts, inviting the audience to join in the evaluation of what is represented as good versus bad. As we will see in the discussion below, the representation of conflict in the songs by U2, however, does not involve taking parts with one of the factions in the conflict, but, rather, it invites the audience to reject taking part in the conflict and take a different course of action.

A second important source domain in political discourse is *RELIGION*, which allows “to invoke spiritual aspirations into the political domain” (Charteris-Black, 2004, p. 103). This source domain is used by U2, on the one hand, to conceptualize the conflict in Northern Ireland as a religious conflict between Catholics and Protestants, and, on the other, to invoke spirituality and peace as the legitimate options in the conflict. This source is important in the songs by U2 because of the spiritual nature of the message the band wishes to communicate.

A third type of metaphor that is frequent in political discourse which is also found in the U2 songs is the *JOURNEY* metaphor, in which “the purposes of politicians’ actions are conceptualized as the destinations of travelers”; more specifically as *PURPOSEFUL SOCIAL ACTIVITY IS TRAVELLING ALONG A PATH TOWARDS A DESTINATION* (Charteris-Black, 2004, p. 93). Although journey metaphors

typically highlight positive aspects of political activity, such as the effort to achieve a common goal, they may be used, as they are in the songs by U2, to highlight the obstacles and problems in a particular course of action. We will see this is the case in the conceptualization of the negotiations for peace in the Irish conflict.

3.3 Recontextualization of the songs and reinterpretation of the metaphors

The reinterpretation of the songs as reflecting on different realities is possible because of the interaction between various discourse strategies and their performance in specific contexts. It may be argued that it is the performance of the songs in specific modes and in geographical and historical contexts that allows for the highlighting and hiding of certain features of the song in order to allow a certain construal of the song. In this sense, we understand that the performance of songs in different mediums and contexts constitutes a special case of recontextualization. In Critical Discourse Analysis, recontextualization is understood as “the selective appropriation of elements of one social practice with another in accordance with distinctive “recontextualization principles” (Fairclough, 2005, p. 64). Crucial to the concept of recontextualization is thus the idea of appropriation dialectic, in which a text or part of a text within a discourse practice is re-used and potentially transformed within a different social practice.

Though most of the work on recontextualization involves the discussion of how discourses are re-used in different genres, such as for example, the transfer of discourse extracts from politics to the media (see, for example, Semino, Deignan, & Littlemore, 2013), it may be argued that song performances such as the ones we are discussing in the present chapter involve a specific type of recontextualization. By this we understand the process by which a song, which is originally created with reference to a specific topic and situational context (see Kövecses’s, 2010 topic triggered and situation triggered contextual creativity) is appropriated by a new audience in a new geographical and historical context. In so doing, the social actors in this new context make it possible to reframe the discourse in order to highlight a different historical reality. A similar process takes place in the video performance of the song “Please”, in which, as we discuss below, we can observe a process of generalization of the topics of conflict and religion so as to go beyond the religious conflict in Northern Ireland and address the potential conflict of religious narrow-mindedness in more general terms. As in other cases of recontextualization, these processes of adaptation observed in the video and the live performances do not just imply that the original text is used in a new context, but they actually involve some crucial transformations. These transformations are possible because of the potentiality of the text for reinterpretation, which is explained below, and because of the important role of social agents in the change in the discourse situation. It is

the interaction between singers and audience which enables the recontextualization process.

4. Metaphors and metonymies in the lyrics of the three songs

Metaphoric creativity in the conceptualization of conflict and the peace process in the lyrics of the songs is manifested by means of three main strategies: first, in the construal of the domain of polarized conflict, which is introduced only with the purpose of being rejected, rather than in order to take sides. Second, by means of the combination of embodied and contextual metaphors; third, by means of various discourse strategies which involve metaphor recurrence, combining, extension and interaction with metonymy. The target domain of conflict runs through the three songs and can thus be said to constitute a metaphorical schematization of conflict or a CONFLICT schema (Bar-Tal et al., 1989); each song highlights and hides specific features of the domain by focusing on different sources or combinations of sources. The main conceptual metaphors, the related metaphorical linguistic expressions and their occurrence in the three songs are shown in Table 1.

The metaphors collected in Table 1 include contextual metaphors and embodied metaphors. Starting from the contextual metaphors, the JOURNEY source domain is used to conceptualize the conflict and the peace process in the three songs (CONFLICT IS A JOURNEY (WITH NO DESTINATION)). It may be argued that this is an extended metaphor which runs through the three songs. The reason for the pervasiveness of the JOURNEY metaphor in the conceptualization of conflict may be related to the entrenchment of the PATH-SOURCE-GOAL image schema and the PURPOSEFUL ACTIVITIES ARE MOVEMENTS ALONG A PATH TO A DESTINATION metaphor, as mentioned in Section 3.2. above with regard to metaphors in political discourse.

In “Sunday, Bloody Sunday” the topic of conflict is conceptualized by highlighting the combination of the JOURNEY metaphor with the POLITICS/CONFLICT IS WAR metaphor. As observed in Section 2. above, this conceptualization of conflict was mistakenly interpreted by some listeners as a call to support the Republicans. However, this assumption is corrected by the verses in the song which conceptualize the claim for spirituality as a war in the final stanza and which highlight the real battle as being that to achieve peace, not that between the two confronted factions.

In “Please”, the JOURNEY metaphor is combined with the POLITICS/CONFLICT IS WAR metaphor, and with the POLITICS/CONFLICT IS RELIGION metaphor, which is highlighted in this song. As is confirmed by the performance of this song in the video, the connection between these two metaphors becomes the focus of the conflict.

Table 1. Metaphorical conceptualizations in the three songs by U2

Metaphorical conceptualizations in U2 songs				
Metaphor type	Conceptual metaphor	Linguistic trigger – “Sunday Bloody Sunday”	Linguistic trigger – “Please”	Linguistic trigger – “Peace on Earth”
CONTEXTUAL METAPHORS	POLITICS/CONFLICT IS A JOURNEY (WITH NO DESTINATION)	– across the <u>dead end street</u>	– September streets <u>capsizing</u> – October talks <u>getting nowhere</u> – November, December, remember, We just <u>started</u> again	– it’s already <u>gone too far</u>
	POLITICS/CONFLICT IS WAR	– But I won’t heed the <u>battle call</u> – And the <u>battle’s</u> just begun – There’s many lost, but tell me who has <u>won</u> – The <u>trench</u> is dug within our hearts – The real battle just begun – To claim the victory Jesus won	– You had to <u>win</u> – Your holy <u>war</u>	
	POLITICS/CONFLICT IS RELIGION		– Your <u>holy</u> war – your <u>sermon from the mount</u> of the boot of your car – your <u>convent</u> shoes – your <u>Catholic</u> blues	
	SPIRITUALITY IS WAR	– The real battle just begun To claim the <u>victory</u> Jesus <u>won</u>		

(continued)

Table 1. (continued)

Metaphorical conceptualizations in U2 songs				
Metaphor type	Conceptual metaphor	Linguistic trigger – “Sunday Bloody Sunday”	Linguistic trigger – “Please”	Linguistic trigger – “Peace on Earth”
EMBODIED METAPHORS	SOCIAL ACTION IS PHYSICAL ACTION	– <u>wipe</u> your tears <u>away</u>	– <u>get up off</u> your feet	
	HATE IS CONFLICT / WAR	– the trench is dug <u>within our hearts</u>		
	CONFLICT IS A CONTAINER			– if you go <u>in</u> hard
	GOOD IS UP / BAD IS DOWN		– <u>Get up off</u> your knees	– <u>Heaven</u> on earth, we need it now
				– throw a <u>drowning man</u> a line.
				– Now he’s <u>in the dirt</u>
	TIREDDNESS WITH CONFLICT IS SICKNESS			– I’m <u>sick</u> of all of this
	A CLAIM FOR PEACE IS SINGING	– how long must we <u>sing</u> this song		– Jesus in the <u>song</u> you wrote
				– <u>The words are sticking</u> <u>in my throat</u>

With regard to embodied metaphors, the three songs express explicit calls to action to end violence by means of embodied metaphors: SOCIAL ACTION IS PHYSICAL ACTION (in “Sunday, Bloody Sunday” and “Please”) and A CLAIM FOR PEACE IS SINGING (in “Sunday, Bloody Sunday” and “Peace on Earth”). These examples present interactions of metonymies (TEARS STAND FOR CRYING, KNEELING STANDS FOR BEING SUBDUED) and embodied metaphors which refer to emotions and actions (CRYING IS BEING SAD, WIPING TEARS FROM EYES IS TAKING ACTION, KNEELING IS BEING RELIGIOUSLY SUBDUED, STANDING IS TAKING ACTION and A CLAIM FOR PEACE IS SINGING). Metonymies are frequent in the three songs, enabling the highlighting of specific details (broken bottles, street, children’s feet, in “Sunday Bloody Sunday” and convent shoes, your family tree, shards of glass, in “Please”) which may acquire a more universal value in different contexts. The metonymies have a strong emotional effect by highlighting effects instead of causes and by evoking powerful images (broken bottles as the result of violent confrontations) and highlighting human body parts (children’s feet, a trench dug in our heart).

The heart metonymy in “Sunday Bloody Sunday” is particularly significant, since it allows for the conceptualization of the conflict as being located in the heart and thus activating an emotion metaphor (HATE IS CONFLICT/WAR).

With regard to the embodied metaphors based on image schemas, the metaphors GOOD IS UP and BAD IS DOWN can be observed especially in “Please” and in “Peace on Earth”. These metaphors allow for a representation of contraries which are evaluated (LIFE IS UP, DEATH IS DOWN; SPIRITUALITY IS UP, VIOLENCE IS DOWN, with a focus on death and on the opposition between spirituality and violence in the songs). Conflict is also conceptualized as a CONTAINER in “Peace on Earth”.

In “Please”, the metaphoric representations are accompanied by negative evaluations of the represented actors involved in the conflict. Thus, the addressee, you, is represented as overly ambitious and inflexible, carrying out actions which have negative connotations, being selfish and pursuing an end which is not legitimate. The persona in “Please” finally rejects the arguments in favour of violent confrontation from both sides.

When considering the occurrence of metaphors in the three songs, it may be argued that an evolution may be observed from an earlier stage which reflects on the conflict and violence during the period of Bloody Sunday (1972) to a much later stage referring to the conflict and the difficulties of the peace negotiations, and finally the tiredness with the conflict after the Omagh bombing (1998) in “Peace on Earth”. While “Sunday, Bloody Sunday” and “Please” use both embodied and culturally-triggered contextual metaphors in patterns of combining and extension for the conceptualization of the conflict and related emotions and call to action, it is worth noticing that “Peace on Earth” hardly presents any instances of contextual metaphors; there are fewer metaphorical occurrences in this song,

and they are mostly of the embodied type. An evolution may be appreciated from more specific and culturally variable conceptualizations of the conflict as WAR and RELIGION, towards a plea for peace which appeals to the more universal experiences evoked by the embodied metaphors of emotion, image schemas and action. These findings regarding the presence and role of metaphors in the songs may be said to confirm the band's feelings and opinions on the nature of the songs, as explained in Section 2. above.

5. Multimodal metaphor and metonymy in the video performance of "Please"

The analysis of the videoclip of the song "Please", officially released by the band, enables us to explore a multimodal representation of the song which provides an interpretation of the lyrics. In this interpretation, the visual mode provides invaluable input for the activation of metaphors and metonymies, both pictorial and multimodal.

As we can see in Table 2 below, visual metonymies function as visual anchors of the CONFLICT domain, while conceptual metaphors have a more evaluative function. The anchoring achieved metonymically is mainly related to the topics of religion and society. We can see a significant use of physical attributes that are associated with different religions in the video. This is the case of the drummers in minute 1.00 which could stand for the Northern Irish Twelfth of July, the Jewish hair and clothing (min. 1.04), the nun habits and the bishop standing for different Christian religions (min. 1.10 and 1.56).

The importance of religious beliefs can be observed in a woman looking up towards an image of Jesus in minute 2.00. Both the upper position of the image together with the upward gaze of the woman contribute to emphasizing the hierarchical power of religion in ruling people's actions. The broad number of physical attributes stresses the universal criticism of religion we can see in the lyrics, without any specific religion being criticized textually or visually.

Cultural understandings of religion can also be observed in the action of kneeling, which metonymically stands for praying. The kneeling movement enables an association between people's behavior in life and religion as their triggering force. The importance of beliefs and the focus on Jesus Christ – and morality – can be seen in the conceptual blend (Fauconnier & Turner, 2002) triggered by the movement towards the sky of the beggar at the end of the video (min. 5.12). This upward movement, together with the beggar's physical attributes, can be understood as invoking Jesus Christ's resurrection. The beggar had appeared at the beginning of the video and most people, except for a child, had ignored him.

Table 2. Conceptual metaphors and metonymies in “Please”

Verbal and visual conceptual metaphors and metonymies in “Please”				
Metaphor type	Conceptual metaphor	Linguistic trigger	Visual triggers	
			METONYMIES FOR SOURCE DOMAIN	CONCEPTUAL METAPHORS
CONTEXTUAL METAPHORS	POLITICS / CONFLICT IS A JOURNEY (WITH NO DESTINATION)	<ul style="list-style-type: none"> – September streets <u>capsizing</u> – October talk <u>getting nowhere</u> – November, December, remember, We just <u>started</u> again 	<ul style="list-style-type: none"> – Feet moving 	<ul style="list-style-type: none"> – Different types of movement
	POLITICS / CONFLICT IS WAR	<ul style="list-style-type: none"> – You had to <u>win</u> – Your holy <u>war</u> 	<ul style="list-style-type: none"> – “Yes/no” sign – Throwing stones 	
	POLITICS / CONFLICT IS RELIGION	<ul style="list-style-type: none"> – Your <u>holy</u> war – your <u>sermon from the mount</u> of the boot of your car – your <u>convent</u> shoes – your <u>Catholic</u> blues 	<ul style="list-style-type: none"> – Drums → Irish 12th July – Hair and Jewish clothes – Nuns and bishop – Image of Jesus on Cross – Kneeling 	<ul style="list-style-type: none"> – Beggar is Jesus Christ resurrecting

(continued)

Table 2. (continued)

Verbal and visual conceptual metaphors and metonymies in "Please"				
Metaphor type	Conceptual metaphor	Linguistic trigger	Visual triggers	
			METONYMIES FOR SOURCE DOMAIN	CONCEPTUAL METAPHORS
EMBODIED METAPHORS	SOCIAL ACTION IS PHYSICAL ACTION	– <u>get up off</u> your feet	– not seeing (looking) is lack of physical action	
	GOOD IS UP / BAD IS DOWN	– <u>Get up off</u> your knees	– Clouds for sky	– Child and beggar are standing – People are kneeling
	A CLAIM FOR PEACE IS SINGING		– Clouds for heaven	– Bono singing in short frame
	BLACK IS BAD / GOOD IS WHITE OR COLOUR		– Violence through people performing violent acts	– Beggar and child dressed in white – Use of color in singing for peace – Raining of black ashes

In addition to anchoring the conflict schema by invoking religious meanings, visual metonymies can help us identify different social groups by highlighting the physical attributes of the individuals appearing on the video. Thus, society is metonymically recalled through references to some of its members – who are individualized (Van Leeuwen, 2008) by the visual foregrounding of their distinguishing attributes. However, this metonymy is arguably circular and, given that many different individuals appear in the video, including males, females, tourists, or couples, the individuals also stand for the whole of society, hence achieving a generalization process.

This generalization process can also be observed in the metonymic recalling of a street, which could stand for any city. The visual characterization of the street where the video activity schema is taking place (Machin, 2010) is quite schematic: The location is visually unidentifiable and we can only see a few buildings; the plaque with the street's name says "no name" (min. 1.43). Likewise, the street is always shown in black and white, thus stressing its schematic features. In minute 1.57, the viewer can see a "yes/no" sign in the background. The street thus becomes a metonymic CONTAINER in which conflict and violence take place.

It can be argued that the use of color in the video is metaphorical and evaluative, as most of the video is shot in black and white, thus denaturalizing the conflict. The use of color, which is more prominent when Bono appears singing against a blue sky in the background, functions as a modality indicator which stresses the call for peace that is expressed verbally in the lyrics. The despair and prominence of conflict is foregrounded when black ashes fall in front of Bono's face. This "black rain" appears when violence is being executed by people (min. 3.34) and the ashes metonymically recall the consequences of fire, thus evoking the metaphorical conceptualization ANGER IS FIRE (Kövecses, 2002).

Color is also evaluative when used in the clothing of the characters, most of whom are not only presented as kneeling, but are also dressed in black or in dark colors. The only character dressed in white is a little girl, who is standing and has free movement (compared to the rhythmic movement of other characters), and is also the only one who looks at the beggar. The little girl disappears from the narrative when violence starts, and only reappears once the beggar has "resurrected." She then holds a sign saying "please," at the same time as the lights in a house are turned on. White is thus associated with light, hence recalling not only the innocence of the child, but also the conceptual metaphors KNOWING IS SEEING, GOOD IS LIGHT and BAD IS DARK (Forceville and Renckens, 2013).

The JOURNEY metaphor is activated both by the lyrics and the visual mode, where the JOURNEY metaphor is triggered by the characters' movement. The type of movement, rhythmic and apparently controlled by an unknown force (probably religion) contributes to evaluating conflict negatively. This socially-determined

movement changes in minutes 3.08 to 3.48 where we can observe an individualistic and fast movement that is associated with violence. The lack of destination can be observed in the metonymic foregrounding of a quick movement of feet and legs while the beggar appears ignored in the background. This contributes to establishing a metaphoric connection between conflict and social blindness to the needs of other people.

The embodied metaphors *GOOD IS UP* and *BAD IS DOWN* are metonymically activated by the image of the sky, where Bono seems to be situated, and its cultural association with heaven. These metaphors, together with a number of close-up frames of the faces of Bono and the beggar, trigger the idea of “seeing from above” that can be interpreted as conceptualizing knowledge (*KNOWING IS SEEING*). This stresses the (moral) authority of the singer that sees land, and the violence performed by people. Likewise, pleading is understood in terms of begging in the video. This is seen not only in the figure of the beggar and its contextual and cultural activation of the *RELIGION* frame, but also in the sign he carries, in which we can read “please”. The beggar’s rising up to the sky after being ignored by different people activates the embodied metaphor *GOOD IS UP*. The action of begging is metonymically a part of the title and the chorus of the song, “Please,” and since both Bono and the beggar are asking for something, an evaluative resemblance can be established between what the character and the singer are asking for. Thus, the conceptual metaphor *A CLAIM FOR PEACE IS SINGING* is contextually evoked as a reaction to the violent actions carried out by other actors.

6. Recontextualization of the three songs across performances

The conceptual metaphors which are activated in the songs in order to conceptualize the Northern Irish conflict can be reinterpreted as conceptualizing other conflicts, once the songs are performed in different geographical locations and moments in time. The recontextualization of metaphors is possible by means of the interaction of embodied, potentially universal metaphors, and contextually-triggered metaphors. This is shown in Figure 2. below, in which we propose a model for the potential recontextualization of the three U2 songs we analyse at four levels: (1) the reactivation of a basic generic *CONFLICT* metaphorical schematization, and topic-triggered *CONFLICT* metaphors, (2) the reconceptualization of the culturally-triggered *RELIGION* source domain, (3) the evaluation of new contexts by means of embodied *UP/DOWN* and *EMOTION* metaphors, and (4) the call to action by means of embodied metaphors of *ACTION*, namely, *SINGING* and *PHYSICAL ACTION*.

The recontextualization of metaphors is possible because they all address *CONFLICT* as a target domain which is metonymically activated by the consequences of

conflicts, as we have seen in the analysis above. As such, the CONFLICT conceptual domain enables the activation of topic-triggered (Semino, 2008) and culturally-triggered contextual metaphors which occur in patterns of combining and extension across the songs. These include the metaphors POLITICS/CONFLICT IS A JOURNEY WITH NO DESTINATION, POLITICS/CONFLICT IS WAR and POLITICS IS RELIGION.

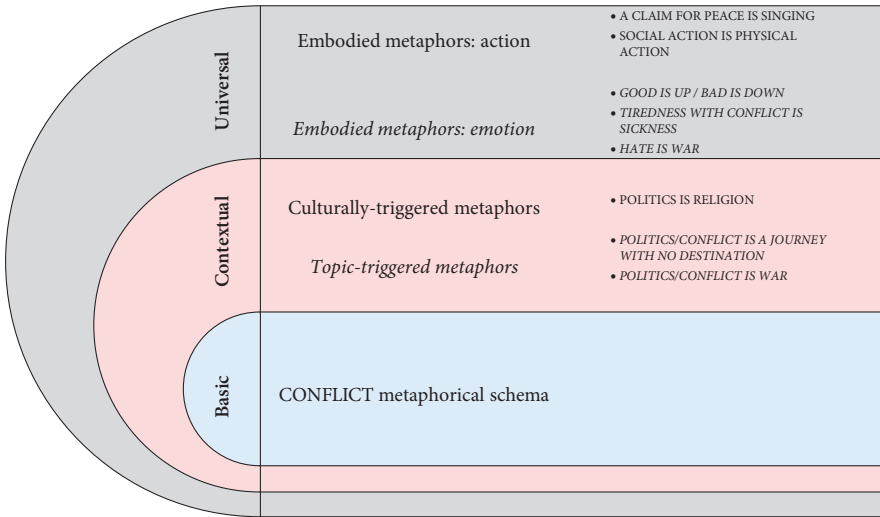


Figure 2. A model for the recontextualization of metaphors in U2 songs

Conflict is thus construed by means of three basic source domains – JOURNEY, WAR and RELIGION – and the frame knowledge and scripts related to these source domains, which can be easily reinterpreted in new contexts, such as 9/11. Recontextualization is possible not only with the two more general source domains, JOURNEY and WAR, but also with the more culturally-specific one, RELIGION. The metonymic triggering of religious descriptions of both the Catholic and the Protestant identities in the Northern Irish context becomes less specific and can be understood as a metonymic identification of any religious identity. Thus, the topic-triggered and culturally-triggered metaphors are recontextualized by means of the new audiences’ appropriation and adaptation of source and target domains in new contexts. Metaphoric linguistic expressions such as “holy war” and “dead end street” are enriched by the specific cultural knowledge activated by audiences in specific geographical, historical and cultural contexts.

Embodied metaphors enable recontextualization by appealing to universal processes of experiencing and reacting to aspects of conflict. We have distinguished between embodied metaphors related to the UP/DOWN image schema and to emotions (TIREDNESS WITH CONFLICT and HATE), on the one hand, and embodied metaphors of performance of physical action, on the other (SINGING and

PHYSICAL ACTION). The former are EMOTION metaphors and UP/DOWN metaphors which focus on what a human being, the singer, feels, and can be extrapolated to those of any human being around the world. The same metaphorical constructs can be used to evaluate different contexts. The latter are embodied metaphors in which a physical action (singing, getting up, wiping tears away) is used as a source to conceptualize social action (take action against conflict and related concepts). Embodied metaphors thus express the emotional and social reactions to the conflict.

With regard to the evaluative potential of the metaphors, the culturally-triggered and topic-triggered JOURNEY, WAR and RELIGION metaphors are not overtly evaluative, but they give rise to negative evaluations of conflict by means of the co-occurrence with evaluative non-figurative language in the co-text of the songs. These non-figurative evaluations reinforce the interpretation of the metaphors and make explicit the critical stance of the band towards the topic of conflict. In the case of the embodied UP/DOWN and EMOTION metaphors, evaluation is overt, and the potentiality for recontextualization stems in this case from the possibility of evaluating and emotionally experiencing different situations of conflict in similar terms (TIREDNESS, HATE). Finally, the persuasive power of metaphor as an instrument for the call to action is manifested in the embodied metaphors A CLAIM FOR PEACE IS SINGING and SOCIAL ACTION IS PHYSICAL ACTION.

The recontextualization of the different metaphors identified in the songs seems to take place at three interacting levels. First, it could be argued that both target and source domains can be recontextualized whenever they are used to describe a universally-understood generic schema or topic – CONFLICT in this case – which is contextually grounded in different times and places. Second, source domains can be used to conceptualize universal experiences – such as emotions and the desire for peace –, which can be applied to the evaluation of conflict in different times, places and cultures. Third, source domains can also be recontextualized in order to understand contextually-triggered metaphors such as POLITICS/CONFLICT IS RELIGION in new contexts.

With regard to the process of appropriation and recontextualization of the metaphors in performances in the US after the 9/11 attack, the source domains are appropriated by the new audiences, so that there is a reinterpretation of the metaphors and metonymies in the songs according to the new situation: religion shifts from an opposition between Protestant and Catholic to Christian vs. Islamic; war shifts from the conflict in Northern Ireland to a war between the US and terrorism; journey shifts from the Northern Ireland peace process to the long journey in the defeat of terrorism.

The embodied metaphors are easily appropriated in the new situation, since the embodied experiences which are mentioned, crying and wiping tears away,

getting up off your knees, feeling hate, singing as claiming, arguably have a universal value and are activated in relation to the CONFLICT domain. The call to action now may become a call to action against terrorism, or, rather, a call to action for peace in the world in the face of conflicts of all types.

7. Conclusions

We have argued that songs are not only discursive creative artefacts but, more importantly, co-constructed social practices shaped in the contexts of different performances. We have examined the textual mechanisms which characterize the metaphoric conceptualization of the topic of conflict in the three songs and we have then discussed how creative contextualizations and recontextualizations of the songs can be analyzed in a YouTube video performance of one of the songs and in the on-stage performance of the three songs in different places and locations. Our study thus contributes to exploring the different ways in which metaphoric creativity takes place in discourse, at the levels of verbal text, multimodal recorded performance and live performance. Because of limitations of space, we have not addressed the role played by the aural mode in the construction of multimodal metaphors in the video of “Please”, and we have only discussed the role of verbo-visual and pictorial metaphors. The analysis of multimodality in the performance of songs as involving verbal, visual and aural modes is obviously an issue which deserves further research.

With regard to the analysis of metaphors in the lyrics of the songs and the conceptualization of conflict, we have argued for an interaction between embodied and culturally-motivated metaphors and we have observed differences in the occurrences and interactions of these types of metaphors in the three songs. We have also observed a progression from a more specific treatment of the topic of conflict in relation to other themes such as war and religion in the earlier songs, towards a more universal claim for peace in the last song “Peace on Earth”. This progression may be said to reflect the band’s attitude towards the conflict and their feelings when composing the three songs, which were created at three very different moments during the conflict in Northern Ireland.

With regard to the process of recontextualization across performances, we have explained how this process is enabled by the creative use and re-use of metaphors and metonymies in three songs by U2. Our study sheds light onto an under-researched area with regard to the study of songs, namely, the study of multimodal performances and the analysis of how metaphoric creativity hinges upon the recontextualization of metaphors in different locations. In performance, songs are appropriated by different audiences and new meanings are co-constructed

collaboratively between the band and the audience, adapting the metaphorical conceptualizations which activate both embodied universal experiences and contextually variable conceptualizations.

Further research is needed on various topics touched upon in the present chapter: first, the way in which creativity arises as a complex process which involves several social agents, from song creators and producers to receivers and audiences; second, how creativity arises from the interaction of various modes in video and live performances; and third, how the interaction between embodied metaphors, which are arguably more universal, and culturally-based metaphors, can be used as a framework for the analysis of creative metaphors in discourse.

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Metaphor emergence in cinematic discourse

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In this chapter, I analyze the creation of meaning in cinema with two of the components of their mise-en-scène: food and cityscapes. I compare Sofia Coppola's *Lost in Translation* (2003) and Isabel Coixet's *Map of the Sounds of Tokyo* (2009a) and I show how those components work as meaning attractors within the complex system of cinematic discourse following Larsen-Freeman & Cameron (2008) and Cameron & Deignan (2006). I consider that metaphor in cinema is a dynamic phenomenon in the Complex Adaptive System created by the work of a team actively participating in the development of a narrative. Processes such as metaphor and the interaction of repetition, intertextuality and cinematic resources are essential elements in this kind of group-creativity.

Keywords: metaphor, creativity, complexity theory, film

Applications of Conceptual Metaphor Theory (Lakoff & Johnson, 1980, 1999) have contributed to the explanation of how the discursive instantiations of these conceptual processes are dynamic and negotiable. Metaphor in film integrates multiple modes of communication, cognitive processes, and cinematographic conventions and resources. In this chapter, I present the results of a comparative microanalysis of two films: *Lost in Translation* (2003) by Sofia Coppola (*Lost*, hereafter) and *Map of the Sounds of Tokyo* by Isabel Coixet (2009a) (*Map*, hereafter). The two elements I focus on, food and Tokyo's cityscapes, belong to the mise-en-scène understood in a very wide sense. I show how cinematic discourse is a complex system in which those components create attractor spaces. Those spaces are the result of the interaction between their literal presence on the screen, their role in the narrative and their figurative meanings motivated either by the contact with other elements of the films, intertextual references and embodied and socio-cultural conceptualizations.

Viewing cinematic discourse as a complex system allows to explain how a common element such as food or the backdrop of the action relate to each other

and are motivated by figurative meanings within films, film styles, genres or other forms of art but also throughout the same film. It can also contribute to the understanding of creativity with a small “c” and how this small “c” is an integral part of the big “C” creativity (see Hidalgo Downing, 2015, p. 108).

A film is a series of interwoven elements in which an object can be associated to an array of meanings at any moment. The audience is able to access any of these meanings according to their background knowledge. As Barthes (1977) states, images in the famous Panzani advert can be viewed as a “lexical unit or *lexia*” that the viewer can interpret by accessing their own background knowledge or “lexicons.” Those lexicons are “a body of practices and techniques” (1977, p. 46) and their knowledge of filmic and generic conventions can be included in this background knowledge. The Complex Systems Theory throws some light on the multilayered cinematic discourse and the integration of underlying cognitive processes and discursive practices.

Previous research on cinema and metaphor multimodal cinematic discourse has addressed this topic from several points of view. It has debated how metaphor can be identified in cinema, (see Whittock, 1990; Carroll, 1996; Forceville, 2002; Rohdin, 2009), image schemas as determining narrative structures (Forceville, 2011; Forceville & Jeulink, 2011) and primary metaphors underlying some cinematic shots and motivating visual metaphors (see Ortiz, 2010). Metaphor scenarios have been identified in films (Eggertsson & Forceville, 2009; Urios-Aparisi, 2010). Bodily movements of face-to-face conversation have been related to cinematic expressive movements (Kappelhoff & Müller, 2011). Fahlenbrach (2008) and Coëgnarts & Kravanja (2012) apply mirror-neurons or mental simulation to how films are conceived by the viewer as she activates those mirror neurons and the image schemas grounding film metaphors in experiential realities. In the context of research on metaphor in cinema, the application of Systems Theory or Complexity Theory to cinema could help understand how different layers of the cinematic discourse interact to create metaphorical meaning.

Previous applications of this Systems Theory to Conceptual Metaphor Theory in discourse has shown how metaphorical expressions are determined by pragmatic and linguistic rules suggesting a way to connect the surface linguistic metaphor and the underlying meaning (see Cameron, 2003; Cameron & Deignan, 2006; Cameron, 2012; Sanford, 2013). As Gibbs & Colston (2012, p. 121) state “[s]imple and complex behavior patterns, including people’s uses and interpretations of figurative language, are higher-order, emergent products of self-organizing process.” The complex process can occur at an individual cognitive level and explains issues such as lexical ambiguity processing (Spivey, 2007) or at the level of “groups of individuals, when clusters of shared beliefs and other cultural norms emerge from communication and influence among those individuals” (Gibbs & Colston,

2012, p. 122). While this article was reviewed, several books and articles on the topic of metaphor and film have appeared (cf. e.g. Coëgnarts & Kravanja, 2015; Kiss & Willemsen, 2017 and Müller & Kapplehoff, 2018). In particular, Müller & Kapplehoff (2018) consider metaphor as an emergent phenomenon resulting of the interaction between the spectator and their experiencing of the images while viewing a film. They connect the embodiment of the film narrative to the gesture and bodily movement. In the same vein as my research here, they demonstrate how necessary it is to develop a dynamic view of metaphor in cinema.

As systems are self-created realities, adaptive to new interactions, these systems are able to build new structures though maintaining their identity. A system is “complex, dynamic, non-linear, self-organizing, open, emergent, sometimes chaotic, and adaptive” (Larsen-Freeman & Cameron, 2008, p. 4). It is defined by a set of components that interact. Through this interaction, they produce an overall state or form at a particular point in time. At the same time, the resulting system affects the properties of the components. This interaction between parts and whole defines the dynamic nature of the system. In dynamic(al) systems, change with time and its “future state depends in some way in the present state” (Larsen-Freeman & Cameron, 2008, p. 29). Systems can be simple such as “a traffic light system” formed by similar simple components that “are connected in predictable and unchanging ways” (2008, p. 27) or complex like “a city.” Such complex systems distinguish themselves from the simple systems because they are heterogeneous. Complex systems can be “elements,” “agents” and/or “processes” and can be formed by other subsystems.

In order to understand how complex systems work, we need to understand how they change. These changes can occur smoothly with slow influence from outside that makes the system adapt progressively. It can shift suddenly and radically. The state of a system is the (dynamic) behavior of elements or agents at a particular point in time, but this system can suffer a “phase shift” when this behavior “changes suddenly to a new and radically different mode” (Larsen-Freeman & Cameron, 2008, p. 45). These changes over time are visualized as changes moving through space. Those stages between phase shifts are called “attractors” and as Larsen-Freeman & Cameron (2008, p. 50) define them, they are “[i]n the topological vocabulary of system landscapes, states, or particular modes of behaviors, that the system ‘prefers.’” There are different types of attractors. Fixed point is a system moving into a stable and preferred state; cyclic attractor is a system moving between attractor states in a periodic manner. Chaotic or strange attractor describes the unstable and unpredictable behavior of a system that can change to another state (Larsen-Freeman & Cameron, 2008, pp. 56–8). As attractors move through space, they do so in different trajectories. It can change into a series of low basins and the attractor rolls through a series of new modes of behavior or attractor states. In a

deep well with steep sides it sits in a stable position and it is not likely to change while the chaotic state sits on top of a hill with steep slopes and it is prone to the chaotic behavior described above (Larsen-Freeman & Cameron, 2008, p. 53).

Cameron & Deignan's (2006) research on metaphor in discourse and in corpora led to identify the metaphoreme as the "emergence of certain stabilities of form, content, affect, and pragmatics" (Cameron & Deignan, 2006 p. 676). An example of metaphoreme in their study is <lollipop tree>. This is a one-time metaphor that, according to them, is used "as the way to reference the unacceptability of trees drawn in a certain idealized manner, and becomes part of the group's repertoire, even if only temporarily" (Cameron & Deignan, 2006 p. 677). According to these authors, metaphorical expressions are determined by linguistic, semantic, pragmatic and affective factors and they are combined into attractor states.

Making a film is a complex system divided in subsystems. Those subsystems are identified with the highly specialized work of particular members of the film production. In interviews and individual accounts, there is clear evidence that all the production members including the actors play some role in shaping the film and its meaning. Especially in the case of Coppola, the script came about thanks to the contribution of Roman Coppola, assistant director, Lance Accord, the director of photography (see Accord, 2004 for his contribution to the film), the protagonist, Bill Murray who plays Bob, and Spike Jonze who did a behind the scenes documentary and was the director's husband at the time. Each one of them had some input in the photography, the settings, and the dialogue of the scenes. On her part, Coixet seems to be in control of most of the process since she wrote the script and she is the hand-held camera operator. The role of the director of photography, Jean-Claude Larrieu, or the film editor, Irene Blecua, play an important role as they are in charge in the production of the film. Sofia Coppola and Isabel Coixet are considered independent filmmakers. The appearance of the independent production companies is the result of the struggle between the director and the studio system. However, their success has led to identifying a new kind of cinema King (2009) calls "indiewood," a mixture of independent and Hollywood cinema. As it is common in independent and auteur films, working always with the same group of collaborators is important since the main point is to maintain a consistent aesthetic and ideological perspective (see Bordwell & Thompson, 2005 for an explanation of the different phases of film creation). The film director's role integrates all the participants in this industry. Those teams approximately coincide with the six moments that generally bear metaphorical meaning according to previous research: montage (Rohdin, 2009), mise-en-scène (Rohdin, 2009; Ortiz, 2010; Urios-Aparisi, 2010), dialogues (Forceville, 1999), lighting (Forceville & Renckens, 2013), and actors' bodies (Urios-Aparisi, 2010).

Sofia Coppola and Isabel Coixet have a similar goal: to create an emotional state in their viewers (see Ott & Keeling, 2011, on Coppola's film).

Sawyer (2003) studies the act of group creativity as it emerges in the interaction in Jazz bands and Improv Theater. In these kinds of performance, their artistic immediacy is an important factor that integrates conscious and nonconscious processes with the presence of an audience (2003, p. 66). Sawyer identifies group activity as a social phenomenon in which "the whole is greater than the sum of the parts" (2003, p. 73). Group interaction and communication is the essence in this kind of creativity, although, as Sawyer indicates, in performance and improvisation the process is more important than the product, while in cinema the contrary is the case. In any case, cinema can be seen as a system emerging out of the collaborative interaction of all these participants under the creative control of the director and producers.

In creativity studies, the distinction is made between everyday creativity and eminent creativity (Runco & Richards, 1997). Everyday creativity "seems an intrinsic quality related to 'phenotypic plasticity,' our ability to adapt and change as a function of conditions (or adapt conditions to us)" (Richards, 2011, p. 474). Creativity is partly motivated by physical and cultural experiences implicated in the meanings the directors would like to convey. Both Coppola and Coixet integrate metaphors, metonymies and repetition as cognitive processes that convey the underlying meanings. At the same time, this integration contributes to the production of an original piece of art, the kind of work that can be labeled as "eminent creativity" or "big C creativity" (cf. Kaufman & Beghetto, 2009).

Lost deals with the relationship between a famous Hollywood actor, Bob Harris (Bill Murray) and a young woman who has recently finished college, Charlotte (Scarlett Johansson). Both are in Tokyo for different reasons, but as they spend more time together, they start being more comfortable with each other, and eventually they fall in love. Notwithstanding, the relationship never goes beyond friendship. Throughout the film, we learn that Bob is going through family and economic problems. Charlotte is not very happy with her own situation and with the relationship with her husband John (Giovanni Ribisi).

Map's protagonist is Ryu, (Rikko Kikuchi). She works in Tokyo's fish market at night and is a contract killer during the day. Two high executives in a company, Nagara-san (Takeo Nakahara), the CEO, and Ishida-san (Hideo Sakaki), Nagara-san's assistant, want Ryu to kill David (Sergi López), a Catalan man who owns a wine shop in Tokyo. The reason is that Nagara-san blames him for the suicide of his daughter and David's girlfriend Midori. Instead of killing him, Ryu and David start a passionate relationship.

1. Food in *Lost*

One must note, first, the importance of food in both films does not exclusively reflect Western stereotypes about Japan. Research from anthropological and socio-logical points of view such as Ohnuki-Tierney (1993), Goldstein-Gidoni (2001), and Hiroko (2008) has shown how food is a feature that is highlighted by Japanese as being part of the national identity of modern Japan. Sushi, white rice, tea and particular ways of preparing and consuming them are highly ritualized. A reference especially important for Coixet's *Map* is the Japanese film *Tampopo* (1985). In this comedy, Juzo Itami satirizes the efforts a group of Japanese people take to adapt to the Western custom of eating pasta instead of following the traditional Japanese way: slurping the noodles (see further Ashkenazi, 2004; Kushner, 2012).

The first scene in which food appears is apparently unremarkable. Bob is shown having breakfast after his arrival in Tokyo (0:18:54.) This is a transition scene and it can be situated within the general content of the first scenes of this film, stressing the cultural differences Bob encounters having just arrived in Tokyo. From the gestures of his face, we could surmise that he is having a traditional Japanese breakfast generally consisting of savory dishes. In the second scene, Kelly (Anne Harris), an obviously anorexic character, denies to Charlotte's husband, John (Giovanni Ribisi), that she is anorexic because "I eat so much junk food, you wouldn't believe it. I'd have a heart attack." Then, she goes on to tell the story about her father being anorexic (00:38:00). This scene is a comic performance of the common concern about thinness and junk food in North American society. The character is talking about her eating anything and then telling an incredible story about her father's anorexia because of the war. In the third one, Charlotte and Bob eat at a Sushi restaurant. In this case, Charlotte shows Bob that her toe is swollen and he jokes about something that would be served in the sushi restaurant (0:58:42). In the fourth scene, eating well is metonymically associated with the general wellbeing and having a good life by Bob in the phone conversation with his wife Lydia (Nancy Steiner) as is transcribed in Imdb (<http://www.imdb.com/character/ch0003806/>):

- | | |
|---------------|---|
| Lydia Harris: | [over the phone] Is this a bad time? |
| Bob: | [pauses] No, it's always a good time. |
| Lydia Harris: | The burgundy carpet is out of stock: it's going to take twelve weeks. Did you like any of the other colors? |
| Bob: | Whatever you like – I'm just completely lost. |
| Lydia Harris: | It's just carpet. |
| Bob: | That's not what I'm talking about. |
| Lydia Harris: | What are you talking about? |

- Bob: I don't know. I just want to... get healthy. I would like to start taking better care of myself. I'd like to start eating healthier – I don't want all that pasta. I would like to start eating like Japanese food.
- Lydia Harris: [icily] Well, why don't you just stay there and you can have it every day?
- Bob: [biting his tongue] How are the kids doing? (1:29:53)

In this scene, the relation between eating well and physical wellbeing is metonymically motivated, but in the folk view of the body, eating well is narrowly mapped onto psychological wellbeing or wellness. The humor of this dialogue is partly due to the conflict between both. Obviously, Bob is talking about “being psychologically well” while Lydia, sarcastic and overwhelmed by her roles as a homemaker, understands the metonymical meaning and recommends that he should stay in Japan if he wants to eat well (and feel well).

In the fifth and last scene in which food is explicitly mentioned, Bob and Charlotte meet in the restaurant with Japanese barbecue just after Charlotte learns that Bob had had an affair with the jazz singer (Catherine Lambert) in the hotel bar (1:24:24). The mention of food in this and the third scene fulfills several functions. First, food is normally present while the film dramatizes intercultural encounters. They stress exotic aspects of Japanese food and the reaction of the characters to the food served. Second, the food item is chosen according to the humoristic intention of the passage. Although the last scene does not have a comedic intention in itself, in the following scene Bob jokes about the fact that in that restaurant, they could not understand the food and you had to prepare your own food.

In the worldview of the body, diet and eating habits represented by characters such as Charlotte, Bob and Kelly, eating well is part of their self-esteem as they are concerned about the way they look and the social and personal consequences of not looking right. Food is present in different dimensions: as part of culturally marked eating habits and as part of physical and psychological wellbeing. Both aspects fit two central issues in this film: the importance of physical appearance and the obsession with aging and the insecurities of Charlotte regarding her own body (see summary in Table 1).

Food is a regular daily activity the characters perform. It is a logical element in a plot although as a prop it can serve other purposes. For instance, it can signal power or intimacy or it can be an extension of the emotional states of the characters as in our case. Instance 4 is a good example of how both the habitual activity and the emotional meaning are motivating the presence of food. By the repeated instances of those connections, one can conclude that the individual personality is understood by the food that is consumed, while having a healthy mind has a direct

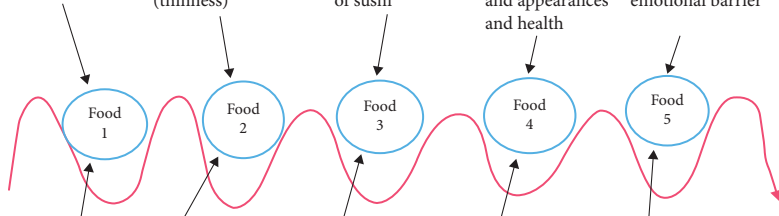
Table 1. Summary of food scenes in *Lost*

Scene		Participants	Meaning	Modes
Food 1	Breakfast	Alone	Exoticism and curiosity	Images, mise-en-scène
Food 2	Kelly's eating habits and anorexia	Kelly, Charlotte and her husband	Metonymic reference to US eating habits and obsession with thinness	Verbal
Food 3	Sushi	Charlotte/Bob. Beginning of the relationship	Emotional situation: Comedic	Verbal, mise-en-scène
Food 4	Healthy Japanese food	Wife / Bob.	Conceptual change through the relationship with Charlotte and Japanese people	Verbal
Food 5	Japanese barbecue	Charlotte/Bob.	Interactional situation: mood change after Bob's one night stand	Verbal, mise-en-scène

relation to the diet concluding that the film develops the overarching metaphors SELF IS FOOD and WELLNESS IS EATING HEALTHY FOOD. The latter metaphor, only cued verbally, is also connected to SELF and to the concept of identity as a national construct shared by all the members that belong to a particular political area. IDENTITY includes the socio-political aspects of this SELF and, in this film, it is an important part of the intercultural conflict and motivation for many jokes.

Table 2 represents visually the interaction of these elements as meaning fixed-point attractors. Such attractors tend to be the fixed type above mentioned, that is to say, they are stable and change slightly with changes in the characters' emotional state and the cultural meanings they attract. Parallel to those changes, the conceptual motivation for their use is also stable. The highlighting of food in the film is connected to its multidimensional meanings: the embodiment of food and mind, the intercultural conflict and the comedic, narrative and characterization functions.

Table 2. Attractor space of food in *Lost*: fixed-point attractor

Figurative meaning	SELF IS FOOD	SELF IS FOOD HEALTH MIND IS EATING HEALTHY	SELF IS FOOD	SELF IS FOOD HEALTH MIND IS EATING HEALTHY	SELF IS FOOD
Cultural level	Exoticism awkwardness	Obsession with eating and appearances (thinness)	Exoticism and comedic elements of sushi	Obsession with eating, and appearances and health	Linguistic barrier together with emotional barrier
Filmic Storyline					
Food	Breakfast	Food Talk: anorexia	Sushi	Food Talk: Health	Japanese bbq
Characters	Bob	Kelly, Charlotte and her husband	Charlotte, Bob	Bob/wife	Charlotte, Bob
Situation	Second morning in Japan	Unexpected encounter with Kelly	Beginning of Bob's and Charlotte's relationship	Bob checks on his family. He is sitting in the tub	Crisis in Bob's and Charlotte's relationship
Time	00:18:54	00:37:13–00:38:48	00:58:42–00:59:42	1:19:31–1:21:37	1:24:24–1:25:58

2. Food in *Map*

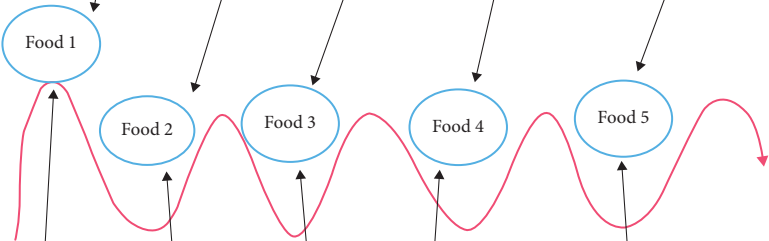
Food in *Map* appears more frequently and focuses on other aspects of the chain of food preparation since the protagonist works as a fishmonger in Tokyo's central market and the protagonists and other guests are shown eating and talking. The first sequence of the film stages a Nyotaimori. This is an obscure custom in which the guests eat sushi off the body of a naked woman. Nagara-san, the traditional CEO of a Japanese company is dining with his assistant Ishida-san and other Western guests, probably from the US. Nagara-san finds this way of eating disrespectful while his assistant Ishida-san is more pragmatic and tries to calm him down by saying it is good for business. Nagara-san's disgust is shown when, after learning his daughter has died, he starts throwing sushi at other guests. The other guests think it is a game and start throwing sushi back and people at other tables join in the fight. This scene sets up generic expectations such as Japanese mafia or Yakuza films.

Nonetheless, the characters most frequently appear consuming ramen soup, a particular kind of noodle soup. This staple of Japanese daily life appears in interaction set in all kinds of specialized restaurants like the Museum of Noodle, a kind of food plaza specialized in noodle restaurants (see Aoki, 2001, pp. 226–7) and also it makes explicit references in the images and the dialogue to what is considered the “Japanese” way of eating them by slurping. The narrator explains how he fell for

Ryu when he heard her slurping noodles and it reminded him of how his mother did it. David and Ryu meet in one of those restaurants and he points out how he cannot get used to eating the noodles the Japanese way. David’s learning how to slurp noodles is parallel to Ryu’s learning to appreciate wine. Both drinking wine and slurping noodles become a symptomatic element of the changes Ryu and David experiment due to their relationship.

In Table 3 I have collected all these instances of food including the Sushi dinner and the rest of the instances where eating Ramen takes place. As in the previous tables, those instances follow the dynamics of a complex system in which they are meaning attractors that reach an unstable or stable behavior.

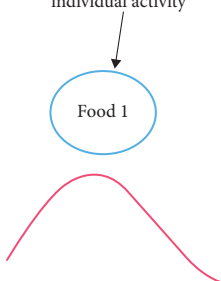
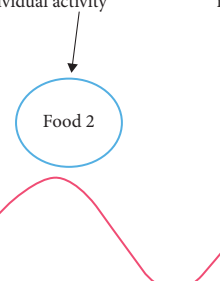
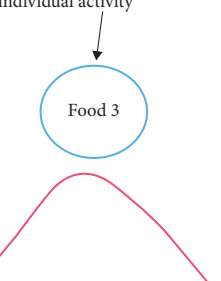
Table 3. Attractor spaces of ramen in *Map*: Unstable versus fixed-point attractors

Conceptual Level	SELF IS FOOD IDENTITY IS FOOD	SELF IS FOOD; IDENTITY IS FOOD	SELF IS FOOD; IDENTITY IS FOOD	SELF IS FOOD IDENTITY IS FOOD	SELF IS FOOD IDENTITY IS FOOD
Cultural Level	Exoticism, Eating as a social activity	Habits, rituals, dishes related to food as a social activity	Habits, rituals, dishes related to food as a social activity	Eating as a social activity	Habits, rituals, dishes related to food as a social activity
					
Food	Nyotaimori	Museum of Ramen	Yakitori or Oden restaurant	Yakitori or Oden restaurant	Yakitori or Oden restaurant
Scene	Company executives having a business dinner	Ryu has noodles with sound engineer	Ryu has noodles with David and David mentions his inability to slurp	Ryu has noodles with sound engineer while he makes a drawing with the soy sauce	A quick shot of David shows him slurping his noodles.
Time	00:00:00–00:04:55	00:06:40–00:11:11	00:40:40–00:42:26	1:12:10–1:13:19	1:29:57–1:30:17

Another typical Japanese product is the sweet called *mochi*. It appears only on three important occasions on the changes of Ryu’s character. On the first occasion, Ryu eats *mochi* in front of the window watching what is going on in the driving school training area across from her apartment (Food 1: 00:16:00). The second time, she is also alone at home before preparing the weapon to kill David (Food 2: 00:34:40). Finally, the last instance David and her kiss while eating *mochi* in the street (Food 3: 1:02:35). Eating *mochi* changes from a solitary activity as it appears to be the only kind of food she has in her fridge until the moment both David and

her share it in a playful show of affection. In the phase space above, eating mocha is an activity that attracts unstable emotional states. It is an act related to extreme loneliness and extreme happiness. Similarly, the *Nyotaimori* dinner is an unstable attractor in the phase space of the film in contrast with the stable behaviors associated to eating Ramen soup, consumed in public spaces together with David or the sound engineer.

Table 4. Attractor spaces of *mochi* in *Map*: Unstable versus fixed-point attractors

Conceptual level	SELF IS FOOD	SELF IS FOOD	SELF IS FOOD
Cultural level	Eating as a social and individual activity	Eating as a social and individual activity	Eating as a social and individual activity
			
Food	Mochi at home	Mochi at home	Mochi in the street
Scene	Mochi at home alone after a day work. She eats it in front of the window watching what is going on in the driving school training area across from her apartment.	Mochi at home alone having prepared the weapon to kill David	Mochi in the street with David. They buy in the street and they kiss while eating it
Time	0:16:00	00:34:40	1:02:35

In *Map* the emotions are raw and the situations are extreme. Ryu who appears unexpressive and uncommunicative throughout the film, breaks down crying when she realizes that she is in love with the man she is supposed to kill and she cannot fulfill the contract. Nagara-san and Ishida-san, heartless businesspersons, appear crying and broken down by the suicide of Midori. Rather than the lineal structure found in *Lost*, Coixet's film is layered with meanings and both kinds of food are related to two different social contexts: the private or sexual one and the social one.

In a film in which food has a central role, Coixet connects the individual self with the very emotional experiences the characters are going through while food is also a social activity framed within the socio-cultural traditions and by extension within collective identities. Although rice is widely seen in Japan as being a defining national dish, Coixet focuses on noodles and eating by slurping as a social activity which involves the preparation, the proper ways of consumption and the places it is generally consumed. The details of this activity are what establishes a clear distinction between those who are insiders and outsiders or other. *Map* establishes the conflict in terms of food and the performance of food consumption in the first scene.

Therefore, FOOD is a source domain that targets especially cultural constructs of personal identity based on stereotypes. Evidently, the target domain and the other elements of the filmic narrative determine the kinds of food. Within the cinematic discourse system, FOOD in *Lost* is an attractor that moves to different fixed-point states. In *Lost*, the state space that visualizes the meanings of food is lineal and stable. The shifts in states are shallow and they do not lead to dramatic or cathartic actions. It is a rather subdued reaction to potentially negative situations. While *Lost* follows a binary schema of opposition, the meaning making of food in *Map* is more complex and nuanced. The duality of both systems shows how food can also be the attractor of unstable emotions and conflicted states of mind and at the same time of socio-cultural meanings. The stress on food as the result of a process and the social activity and meaning of slurping noodle soup and of eating *mochi* is meant to represent David's struggle to adapt to Japan and Ryu's unhappiness. This analysis shows how the same metaphor changes slightly as the storyline and the characters' personality progress.

3. Metaphors of Tokyo

As the films narrate the experience of a Westerner in Tokyo, the setting is particularly significant and carefully organized to re-create the experience the characters live. The city is present as backdrop in nearly every scene of *Lost* in particular because of the views from the rooms of the Hyatt hotel where the two main characters are staying. The story of Tokyo's views is connected to the characters' struggles while those struggles are acted and expressed at the same time with words and music.

In the first scene after the title sequence, Bob is looking at the neon lights that cover the buildings while he drives to the hotel in a taxi (00:01:16–00:02:18). From the hotel room, Charlotte, sitting on the windowsill, is looking down and contemplating the dark cityscape underneath. Similar scenes are repeated in two instances throughout the film (00:08:03, 00:36:44). The view of the city changes with the weather and the time of day. The film narrates what happens to these two characters during seven days and most of the days start and finish with a view from the hotel.

The hotel is situated in the center of the action and this seems understandable since it is the provisional home, but, outside the hotel room, they wander around the city. This is particularly the case of Charlotte's walks around the city. In 00:12:06–00:12:35 she walks into the subway looking at a subway map, then looking at the manga comic another passenger is reading or finally visiting a temple. Later on, she appears contemplating the huge screens in Shibuya (00:19:01–00:19:08).

Bob appears doing something similar when, after escaping from his entourage (1:17:11–1:17:15), he walks along a busy street and sees a group with loudspeakers.

Two other night sequences follow the main characters throughout the night-life in the streets of Tokyo. In the first one (00:44:09–00:53:49) Charlotte invites Bob to go out with her and her friends. They go out on an adventure to different places: bars, discos and a party at a stylish apartment where they sing karaoke. The following night they also try to meet with the same people, but the place they meet happens to be a strip club and both go for a walk in the street. It culminates in a scene when they happen to see a truck with an advertising board of Bob's commercial for Suntory whisky (1:03:19–1:05:19). All these scenes focus on features of Tokyo's life in the street emphasizing the contrasting elements of the life in Tokyo. The views of the city from above and as the characters walk around suggest Tokyo is conceptualized as a labyrinth. These scenes focus on aspects of Japanese culture, architecture and habits that are markedly different and, therefore, insist on different aspects of exotic Japan.

The two views of the city from above and from within coincide with what Doob (1992) has shown to be the two possible views of a labyrinth. From outside, one admires the beauty of its complex design while from within the labyrinth is a disorientating series of spaces without any exit and, according to Doob (1992), the fear of not being able to find the exit dominates the person inside the labyrinth. As metaphor, Tokyo is a domain that is mapped with the cultural and experiential features of the labyrinth and it encapsulates the characters' experience. The characters are tourists literally "lost" in a city of skyscrapers, streets full of people, in a language they do not understand and strange habits.

As Charlotte's and Bob's relationship progresses, Tokyo becomes the location of their relationship as it is explicitly expressed on two occasions. In 1:08:53, Charlotte comments on the fact that Tokyo is not going to be "fun" once Bob leaves while later she suggests that they should stay in Tokyo and form a jazz band. This is in keeping with other films in the same travel genre as in Wyler (1953), Ivory (1985), Lean (1984) and Linklater (1995). It also creates slight changes as to what Tokyo means. If until that moment, Tokyo was the location of an exotic reality Bob and Charlotte encounter, once the relationship has taken a more romantic turn, the city becomes the locus of their relationship and it is endowed with positive emotional elements.

In *Map*, shots of the cityscapes taken from the river and the air show a different representation of the city. These shots repeatedly highlight the sense of movement of the inhabitants as well as the rivers, subways, trains and cars. These shots are found throughout the film and can be summarized in the following list:

0:40:55-0:06:19	Introductory Credit sequence from a boat in the Sumida River
0:05:30	Views of the train passing over the river
0:11:11	Transition shot: subway train on an overpass
0:15:15	Ryu in the subway
0:15:48	Ryu walking down the subway hall
0:20:23	Transition shot: aerial view of Tokyo
0:52:56	Transition shot: aerial view of Tokyo
1:27:59-1:29:10	Ryu facing the city across the Bay
1:29:21	Shot of the spaces between the buildings while the sound engineer says "I know there are voices lingering from the Edo period trapped in the dark spots between the buildings in Tokyo"
1:30:37	Transition shot: aerial view of Tokyo
1:38:53	Transition shot: aerial view of Tokyo

Tokyo is divided between the modern apartments and traditional Japanese buildings. The protagonist, Ryu, spends her time between her minimalist apartment in Ueno, overlooking a driving school practice area, her work, the fish market place at Tsukiji, the traditional eating places where she meets with David and the narrator in Tsukiji and Shimokitazawa, location of the love hotel *La Bastille*. In contrast, Nagara-san's and Ishida-san's scenes are in the upper-class neighborhoods of Roppongi Hills, Aoyama or Omotesando. Tokyo in *Map* is a dichotomy of modern versus traditional structures. This dichotomy follows the two generic traditions of Japanese cinema that are conflated in this film: The Yakuza films (e.g. Akira Kurosawa, *Drunken Angel*, 1948, or Takeshi Kitano's *Sonatine* 1993) and films such as Yoshihiro Ozu's (1953) *Tokyo Story* that focus on stories of regular people with an edge of social criticism. The former genre depicts a male-centered society of violence and power. This traditional Japan is opposed by Ozu's cinema whose protagonists are old people or children or women.

The film narrates how Ryu falls in love and how David is unable to integrate in the Japanese culture, but this experience changes him, as he seems to recreate this world when he returns to the place he is from. The transformation of the character into a new self follows the conventions of the travel genre as we have seen in the case of *Lost*. In *Map*, Coixet is portraying a world in which cultures are already interacting and are integrated in each other as are David's wine shop in Tokyo and his shop of Japanese products in Barcelona.

From the point of view of Complex Systems Theory, the components of the system align themselves in a pattern that is self-organizing and adaptive and leads to the emergence of some behaviors that are preferable to the system. In the case of *Map*, the settings and cityscapes of the film align themselves with the characters

and their behaviors to create a new mapping that transforms the conventional metaphor SELF AS LOCATION (Lakoff & Johnson, 1999) into SELF AS WATER OR FLUID ENTITY. This metaphor highlights fluidity and dynamism. The presence of water is layered and complex. The Sumida River of the title sequence shows unusual views of Tokyo. The camera focuses on the washing of the blood in the market and on the showers some characters take. Ryu cleans the headstones of the men she has killed with water while in her first meeting with Ishida-san it is raining. The noodle soup they eat throughout the film, the wine David sells or the sake he ends selling when he goes back to Barcelona are also prominent features of this water motif. Therefore, the metaphor CITY AS IMMOBILE ENTITY is transferred to a dynamic view in which CITY is identified with the features of mobility, change and diversity. Nonetheless, this does not mean that one metaphor substitutes the other. Both remain as alternative views of the world to some extent embodied in the secondary characters.

This distinction between active and dynamic, and static and conservative city is connected to the filmic intertexts. Tokyo in *Map* is a person with memories divided between contrasting worlds, and in which the characters struggle to deal with loneliness and pain. Tokyo is a reality in movement. This movement is to some extent contrary to the stability and immobility of the building and the cityscapes. As in the case of the two spaces: old Tokyo versus new Tokyo, in *Map* movement and immobility are opposites that represent two different conceptualizations of the city and the characters' identity. The old-fashioned sound-engineer and the businesspersons live in the past and are unable to change or adapt. Ryu and David are shown to struggle between the reality of Japanese culture. In the case of David, the struggle takes a new dimension within the new reality of globalization and virtual reality. In this world, he is torn between two opposite worlds and changed by the whole experience to the point that, when he goes back to Barcelona, he opens a shop with Japanese products and is shown being haunted by his life in Tokyo.

Therefore, the metaphor can be analyzed with the following mappings:

CITY IS FLUID ENTITY

MOVEMENT IN THE CITY IS MOVEMENT OF A FLUID

CITY SPACES ARE A CONTAINER WITH OPEN / MOVING/ CHANGING BOUNDARIES

CITY INHABITANT IS WATER ANIMAL

As mentioned above, in mainstream cinema the narrative structure could be called the mold that determines how all the components interact. It is not surprising that the underlying metaphor both *Map* and *Lost* share is SELF AS LOCATION. This metaphor determines the characters' conflicts and difficulties as they encounter another world. The drama is set around how difficult (or impossible) it is to change a worldview that determines some of the essential elements of what a human being

is: the attachment to the place of birth, the association to her parents, friends and the values and behaviors she acquired through interaction and education. The films explore the dislocation of travelling especially in a country that is essentially distant to the original one. The individual, who is outside the location that defines the person's identity, loses to some extent the parameters that defines it. This dislocation brings about the possibility of challenging established sets of beliefs. This allows the filmmaker to explore topics such as the opposition of rationality versus emotions, cultural differences in beauty, love, relationships, etc.

This overarching metaphor motivates the behavior but as the location is identified with the setting of the film, it is also the target domain of different metaphors. The first metaphor in *Lost* is that of labyrinth. In *Lost* it starts with the mixture of loss and awe that Tokyo instills in the characters. In my analysis, this sense is related to the labyrinth experience as the characters contemplate the beauty of the city and are literally lost within that space. As the film progresses Tokyo's conceptualization transfers from Tokyo and becomes the location of a love affair. It must be noted that this is clearly stated by the characters' dialogue. While Bob and Charlotte are inside the hotel room talking, the camera focuses on their reflection on the windowpane and the image of the reflection superimposes over that of the city at night. Coppola avoids using other technical devices such as the superimposition of the image of the character over the cityscape in a montage but the character takes it as a natural conclusion of their love affair. In Tables 5 and 6, I have delineated how both films differ in relation to the elementary experience of the metaphor SELF AS LOCATION they both intend to challenge. During the film, this location is identified with Tokyo.

Table 5. Figurative meanings of Tokyo in *Lost*

<div> <div>Figure</div> <div>metaphor</div> <div>metonymy</div> <div>metaphor</div> <div>metonymy</div> </div>	TARGET	SOURCE/TARGET	SOURCE
		TOKYO	PERSON
		TOKYO	FOR THE ROMANTIC EXPERIENCE IN TOKYO
		TOKYO	LABYRINTH
		TOKYO	CONTAINER
	SELF	LOCATION	

Contrary to this view, *Map* narrates a falling out of love of David with the city and Ryu's decision to break away with her own past as she falls in love with David. This conflict is also represented in close parallelism with metaphors of the city. Again, the city is a location onto which SELF is mapped, but the Tokyo shown in this film is divided between two opposite worlds. The use of the camera work and the transitions convey movement versus stability or emotion versus self-control and dominance. The metaphors TOKYO AS AN IMMOBILE ENTITY and AS A FLUID ENTITY alternate and dramatically represent the conflict between the characters. Underlying both metaphors is the metaphor SELF AS LOCATION as mentioned

above. The interaction with characters such as David and Ryu and their relation of extreme emotional involvement is parallel to how the city is represented as a fluid entity. The metaphor SELF AS FLUID ENTITY identifies the self as flexible and adaptable.

Table 6. Figurative meanings of Tokyo in *Map*

Figure	TARGET	SOURCE/ TARGET	SOURCE
↑ metaphor metonymy		TOKYO	PERSON
		TOKYO	FOR THE ROMANTIC EXPERIENCE IN TOKYO
metaphor		TOKYO	FLUID ENTITY
metaphor		TOKYO	IMMOBILE ENTITY
↓ metaphor	SELF	LOCATION	

4. Conclusions

By comparing food and cityscape in both films, I shed light on how the components of the film discourse interact with each other in order to satisfy discourse requirements but also how they adapt and self-organize. Although both have been largely regarded as ornamental accessories of the cinematic mise-en-scène, they are central in issues of continuity or historical accuracy, and, as shown here, they are important as they contribute with meanings that appear largely unnoticed. They include elements of the internal narrative of the film, but also include extra-narrative information derived from processes associated to the creators' conceptual realities, and cultural or cinematic knowledge.

As I have shown, *Lost* is naturalistic in its temporal and physical dimension as all occurs within the week the characters stay in Japan. In *Map*, flashbacks in time and changes of location are quite remarkable. One clear difference is the fact that Ryu is a Japanese woman. The status of the opposition Self/Other changes from one film to the other. While Charlotte and Bob are the protagonists whose point of view dominates the image of Japan shown and evaluated in the film, in *Map*, David's perspective and disappointment dominates the film, but Ryu is also the Other in opposition to the male-dominated Japanese society she seems to confront. Coppola's *Lost* continuously refers to the future and the individual as a rational being able to see and find a solution. Contrary to the action and goal oriented traditional Hollywood film, her film does not progress towards a climatic conclusion (wedding, future of the newly formed couple together), but it ends up being an inconclusive love story. In Coixet's case, rather than focusing on the rational decision-making, it is the perception through the senses rather than the mind that can lead to knowledge or a knowledge that transcends the one obtained

through our thought processes. Therefore, she focuses on soba noodles, the cooking process and the eating rituals. The story is situated in a system of oppositions: Japan-West, male-female Japanese society, thinking versus feeling. The worldview is circular, dynamic and based on emotional communication.

According to Sofia Coppola and Isabel Coixet, their films' starting point was their own experiences while living in Japan (cf. Coppola in Rose, 2003 and Coixet, 2009b) and a character or a location. In Coppola, making a film in the Hyatt Hotel seems to be an important motivation (cf. Knecht, 2009 and Iwabuchi 2008). Charlotte's attitude, style and personal situation in her marriage seem to be related to Sofia Coppola's although Coppola herself also indicates that her model was Classical Hollywood famous couples. Coixet explains how she had the idea about her film from watching the inexpressive fishmongers in Tokyo's fish market. Those starting points must have led to a first script that serves as a blueprint of the film and funding. Some of the visuals could be pre-defined in the storyboard that helps create "a preliminary sense of what the finished shots should look like" (Bordwell & Thompson, 2008, p. 17), but Coppola's film had not created a storyboard and in this case, the participation of the crew, friends and family was essential. Some scenes were shot because the weather or other circumstances were favorable.

The importance of the *mise-en-scène* points towards the contribution of the production team in defining the aesthetics of the film. The director's vision is achieved through this collaborative effort that is sometimes really influential. For instance, through interviews and articles we know that Sofia Coppola's father, the famous director Francis Ford Coppola, played a role in the montage of the film. In this film, some of the dialogues and the scenes were inspired or created by the actor Bill Murray who played Bob. We also know that some scenes were created at the last moment as the director and the director of photography Lance Acord or Sofia's brother Roman Coppola decided to take a chance and record a scene in an unusual weather or light (see Thompson, 2003; Knecht, 2009).

The mapping of objects or cityscapes onto abstract entities is the result of the collaboration of multiple individuals. Their interaction is a central aspect of the group creativity processes identified by Sawyer (2003). The whole and its parts interact continuously in the creation of film rhythm, a central element in the developing of a successful narrative (cf. Iedema, 2001). As mentioned above, Sawyer (2003) concludes that improvisation in a jazz or a comic performance is different to other kinds of artistic endeavors because of the focus on the process and the product. Nonetheless, further analysis should consider the importance of the synchronization between the different layers of the production team, and Csikszentmihalyi's (1996) view of creativity as a "flow" insists in the organic participation of multiple entities towards a single goal.

Consequently, further analysis should compare this creative process with other artistic processes and identify their similarities. For instance, the continuous drafting and sketching some painters do before the production of an oil painting shows the struggle to find the right representation of the object, story, character, idea or emotion. Emotional and biographical elements also determine those artistic intentions and choices and, ultimately, beyond the creation of the work of art, the main point is to be able to integrate this piece within the artist's own narrative and style.

The adaptation of the components in cinematic discourse is pre-determined by a series of constraints related to the generic framework in which the directors insert their work. But, following the Complex Systems Model, those components are attractors that integrate the presence of the component (kind of food or cityscape) as part of the daily activities of any human being, the general narrative development of the film and the metaphorical meaning connected to the implicit network of connections.

Food and cityscapes cannot be considered the kind of “metaphoremes” Cameron & Deignan (2006) find in their study of linguistic data, but they are multidimensional entities that bundle metaphorical and narrative meanings and functions. Repetition is a particularly important resource in cinema, and in the case of *Map* and *Lost*, once food appears for the second time and this presence is reinforced through the characters' words or the camerawork, it becomes a meaning pregnant entity (see also Urios-Aparisi 2014). In a film, meanings are bundled multimodally in images, words, characters, music, camerawork, and mise-en-scène. These meaning change by their association to either of those elements, but its literal representation remains relevant to the cinematic discourse. In the films analyzed here, I have shown how every single element is immersed in the changing emotional state the characters experience. The behaviors those two components show in both films are consequently different and the directors' ultimate goal is to dramatize those emotions.

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What makes an advert go viral?

The role of figurative operations in the success of Internet videos

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This chapter investigates the potential role played by the creative use of figurative operations, such as metaphor, metonymy, irony, hyperbole, and understatement, in the success of Internet videos. Irony and figurative language based on creative contrasts between contrasting scenarios were found to be strong predictors of popularity. This effect increased if the message was conveyed through a combination of words and images, rather than through the use of either mode in isolation. No effect was found for the positioning of figurative operations in the advertisement's timeline. Our findings contribute to the wider marketing field by establishing figurative operations, in particular irony, as a potential determinant of a video's success.

Keywords: metaphor, metonymy, advertising, creativity, hyperbole, understatement, irony

1. Introduction

In response to the growing importance of social media in recent years, brand developers have started to make advertising videos that have the potential to be viewed, liked, commented upon and shared on digital platforms, such as YouTube. Many of these videos contain creative uses of figurative communication in the form of words, images and music. The dynamic, multimodal nature of the videos means that they provide an excellent test base to explore the role of figurative creativity across different modes.

With the exception of a few studies (e.g. Berger & Milkman, 2012; Dobeles, Lindgreen, Beverland, Vanhamme, & R. Wijk, 2007; Guadagno, Muscanell, Hardison, & Cialdini, 2013; Kaplan & Haenlein, 2011), the prevalence and success of Internet videos have been largely under-investigated in the literature. Kaplan

and Haenlein (2011) have argued that their popularity is likely to depend on three factors: the influence of the *messenger* (i.e. information specialists that have access to wide audiences, such as celebrities and experts); finding the right *timing and context* (e.g. commercials shown during the Super Bowl final are known to become viral, due to the large audience attracted by the match); and making the *message* interesting, impactful and memorable.

The focus in this chapter is on the *message*. More specifically, we investigate whether the creative use of figurative operations (e.g. metaphor, metonymy, hyperbole, understatement, irony) in the words, music or images that the videos contain relates in any way to the popularity of the videos. Related to this, we also explore the role of humor, which often results from the creative use of the figurative operations listed above. Humorous content has been also found to lead to popularity of internet videos (Hsieh, Hsieh, & Tang, 2012; Tucker, 2015). Constructing creative and engaging video advertisements requires skills and a great deal of nuance. As pointed out by Kaplan and Haenlein (2011, p. 257), “making a message more memorable and interesting, or simply more infectious, is often not a matter of major changes but minor adjustments.” However, the nature of these “minor adjustments” is not clear. Guadagno and colleagues add that in order to go viral, a video must contain content that triggers a strong affective response, but lament the fact that we still know next to nothing about “[the] qualities [that] lead some Internet videos to reach millions of viewers while others languish in obscurity” (2013, p. 2312).

Research shows that emotions plays an important role in shaping consumers’ behavior and, ultimately, decision-making (Khuong & Tram, 2015; Roozen, 2013; Sebastian, 2014). This has given rise to the notion of “emotional advertising”, a strategic concept that has been described as one of an advertiser’s most important tools for successful marketing (Majeed, Lu, & Usman, 2017; Roos, 2014). The emotional appeal of an advertisement can be channeled in multiple ways: factors that have been found to make advertisements more impactful include color (Lichtlé, 2007), image or picture quality (Small & Verrochi, 2009), music (Lii & Sy, 2009; Mayer, Salovey, & Caruso, 2008; Tomey, 2014), and the message being delivered (Mogaji, 2015). In our view, the fact that figurative operations (a) operate in a multimodal manner, (b) have the potential to be used creatively, and (c) have the ability to appeal to the emotions makes them potentially powerful contributors to the success of video advertisements, and by extension, consumer behavior.

In more traditional approaches to advertising research, metaphor (the most widely studied figurative operation) has been shown to lead to favorable attitudes towards advertisements (Mcquarrie & Mick, 1999). It has also been found to make them more likely to be remembered (Phillips & McQuarrie, 2004). In addition to the qualities outlined above, the use of a creative metaphor results in a degree of *conceptual incongruity*, which needs to be resolved by the viewer. In order to make

sense of this incongruity, the viewer must work to understand the message and it has been suggested that in doing so, they develop a stronger sense of ownership of the message being conveyed (Stayman & Kardes, 1992). Conceptual incongruity can also be found in the creative use of other forms of figurative language, such as metonymy, hyperbole and irony, albeit to differing degrees. We discuss the potential role played by conceptual incongruity below, but for now it suffices to say that there is a strong likelihood that the presence of metaphor, and figurative language more generally will contribute to the success of an internet marketing video as it has been found, among other things, to evoke shared knowledge and therefore empathy, evoke affective responses, entertain, and perform subtle persuasive functions. The study described in this chapter tests this hypothesis.

There has been surprisingly little research into the role played by other figurative operations besides metaphor, such as irony, euphemism, hyperbole and understatement (which can operate alone or in conjunction with metaphor and metonymy) in the effectiveness of branded content, which is surprising given their potential rhetorical effectiveness. They all involve a degree of conceptual incongruity which is resolved through the evocation of shared knowledge, which allows the perceiver to establish a relationship between what is said and what is intended. This makes them potentially powerful tools in branding as their presence may help to establish a subtle relationship between the consumer and the product.

In this chapter, we describe a study in which we sought to identify the extent to which the creative use of figurative operations in Internet videos relates to their popularity. We were particularly interested in exploring the impact of the density of the figurative operations, the types of figurative operation and their coverage, and their positioning with the video. The chapter comprises six sections. In Section 2 we provide an overview of the types of figurative language that form the subject of this study (metaphor, metonymy, irony, unmarked contrast, hyperbole, and understatement), and illustrate their creative use in real Internet videos. In Section 3 we describe the ways in which we operationalized the variables in our analysis: density, coverage and positioning, and formulate the research questions driving this research. We deal with methodological considerations in Section 4, then report our findings in Section 5. We conclude our chapter in Section 6 where we retrieve the main proposals put forward in our investigation and suggest potential lines for further research.

2. The creative use of figurative operations in internet videos

In this study we investigated the role played by the creative use of different types of figurative operations in making Internet videos more impactful and memorable (and thus, more likely to become viral).

2.1 Making creative use of the connection between two entities: Metaphor and metonymy

Multimodal metaphor, a concept first introduced by Forceville (2009), has attracted a significant amount of scholarly interest in recent years. Forceville and Urios-Aparisi (2009, and references therein), Hidalgo and Kraljevic (2013) and Pérez-Sobrino (2017) have shown that the cross-domain mappings facilitated by multimodal metaphor are a useful tool for advertisers as they allow organizations to borrow positive values from a well-connoted scenario (the *source* domain) and attach them to the promoted commodity (the *target* domain). Metaphor has been found to be more effective than literal language in traditional forms of advertising, particularly when it is used creatively (Phillips & McQuarrie, 2004), and visual metaphors have been found to be more effective than verbal metaphors in printed advertisements (Ang & Lim, 2006; Chang & Yen, 2013; Gkiouzepas & Hogg, 2011; Jeong, 2008; McQuarrie & Phillips, 2005; Morgan & Reichert, 1999; Phillips & McQuarrie, 2009). It is for these reasons that Esso famously invited consumers to ‘put a tiger in the tank’, and for their subsequent advertisements to feature a photograph of a tiger in the wild. As we will see in the examples below, creative metaphors involve novel source and target domain combinations or a creative realization of a conventional mapping thus highlighting non-conventional aspects of the source and target.

Metaphor can be broadly divided into two types: resemblance metaphor and correlational metaphor (Grady, 1997; Yu, 2009). Resemblance metaphors exploit the perceptual similarities between two different entities, so the source is used to refer to a target that looks or sounds like it. An example of a resemblance metaphor can be seen in the advertisement of *Old Spice* soap, which is shown in Figure 1. In this advertisement, what initially looks like a basketball ends up being a watermelon. This advertisement introduces a conceptual incongruity which is resolved by the fact that both entities are characterized by a spherical shape. The connection is unexpected, as it violates the expectations triggered by the preceding audiovisual content. Up to this point, the advertisement seems to be about soap for sportsmen who are “playing to win” (according to what the jingle says). The fact that the basketball turns out to be a watermelon that contains the promoted soap triggers a surprise effect that is reinforced in the lyrics of the accompanying jingle:



Figure 1. Still from “Old Spice soap – Watermelon”

“(If you’re playing to win), here’s a brand-new soap for you. Nope I was wrong this is a commercial for fruit. Nope I was right it’s really a commercial for soap.”

In contrast, correlational metaphors are built upon the systematic conflation of two experiences in our everyday lives, usually one abstract and one concrete. For example, affection is often experienced, and therefore described, as warmth (e.g. *‘Charles is a cold fish and Diana needs someone warm’*, British National Corpus), moving forward in time is often experienced, and therefore described, as moving forward in space (e.g. *‘They were teenagers, looking ahead to a life where anything wonderful could happen’*, British National Corpus), and happiness is often experienced as and therefore described as having an erect body posture (e.g. *‘My meeting with the Countess was an uplifting occasion’*, British National Corpus). In each of these correlational metaphors, the structure and logic of the source is used to reason about the target wherever a correspondence is plausible. Correlational metaphors are particularly suitable to convey stories and experiences in audiovisual discourse (Forceville, 2008, 2009; Ortiz, 2011). Figure 2 shows an advertisement for Dove soap which makes creative use of the correlational metaphor: MOVING FORWARD IN TIME IS MOVING FORWARD IN SPACE. In this advert, as women walk towards a building, they are invited to choose one of two doors to walk through. One door is marked ‘beautiful’ and the other is marked ‘average’. Women are encouraged by their family and friends to go through the “beautiful” door as a way to overcome a social barrier and to live their lives, viewing themselves as someone who is “beautiful” rather than “average”. Our knowledge of doors as physical barriers allows us to think about the different decisions they may take and the different directions that their lives will go in as a result. This metaphorical scenario provides a creative representation of the daily struggles that women face in their lives. Here the conceptual incongruity arises not from a novel juxtaposition of entities (as with the basketball/watermelon example) but with the placing of a known experiential pairing in a new context. People are used to talking about and experiencing life as a journey during which they may choose different paths, but here the journey is rendered literal and the different paths relate to women’s perceptions of

themselves and how this will shape their future. This is something of a departure from the usual ways at which life's junctures are conceived. We usually talk about people choosing between paths on a journey when they are attempting to choose, for example, between different careers, different romantic partners, or different courses of action more generally. Here the choice is more of an internal nature as the women are being asked to choose between different views of themselves, which will shape their future paths. The resolution of this conceptual incongruity requires the viewer to activate the 'life is a journey' metaphor and then to apply it to internal mindsets rather than to external choices.



Figure 2. Still from *"Dove – Choose beautiful"*

As we saw above, one possible reason for the success of creative metaphor in advertising is that when faced with a creative metaphor, the reader or listener has to draw the conclusion for themselves and this leads to an increased sense of ownership of the message (Stayman & Kardes, 1992). This sense of ownership is likely to make them better disposed to the message via the 'instant endowment effect' (Kahneman, Knetsch, & Thaler, 1991) and, by extension, to the product. Where creative uses of correlational metaphor are concerned, another possible reason for the success is that correlational metaphors have been found to evoke sensorimotor responses in the reader/listener (Gibbs, 2014). Neuroimaging studies have shown that when a person encounters, or experiences, a correlational metaphor, a sensorimotor representation is generated in the brain, so for example, when we see or hear the word 'warmth' used metaphorically, we have an internal representation of the physical experience of warmth (Lacey, Stilla, & Sathian, 2012), and metaphorical uses of words involving parts of the body (e.g. 'grasp a concept' and 'kick a habit') activate the motor cortex in the same way as their literal counterparts (Boulenger, Hauk, & Pulvermüller, 2009). The engagement with

these regions increases with the extent to which the metaphor is used creatively (Desai, Binder, Conant, Mano, & Seidenberg, 2011). The processing of correlational metaphors has also been found to activate the amygdala, a part of the brain that is associated with automatic processing of intense emotional stimuli (Citron & Goldberg, 2014). Citron and Goldberg point out that left amygdala activation has been found to facilitate the successful encoding of emotional verbal material in the hippocampus (Phelps, 2004; Richardson, Strange, & Dolan, 2004), and that concurrent activation of these two regions has been associated with the successful retrieval of emotional memories (Dolcos, LaBar, & Cabeza, 2005). Thus, individuals have very powerful motoric and affective responses to these metaphors, which means that they are likely to remember them.

Metonymy involves accessing one concept through reference to another *related* concept (for example, the use of ‘Wall Street’ to refer to the American financial markets). It can be found in a wider range of forms of expression, including language, art, music, dance and film (for a review, see Littlemore, 2015), where it operates as a kind of communicative shorthand and allows people to use their shared knowledge of the world to communicate with fewer words than they would otherwise need. It has been shown to serve a wide variety of communicative functions, such as relationship-building, evaluation, the reinforcement of group membership and cohesion, and the development of textual cohesion (Littlemore, 2015).

Metonymy has the potential to be a very effective tool in branding because it makes it possible to represent features of the message in an economical and straightforward way. Moreover, it can be used in highly creative and humorous ways (Littlemore & Tagg, 2018) which renders it a potentially useful tool in audio-visual advertising, where humor has been shown to be a valuable resource (Chan, 2011). We can see an example of the creative use of metonymy in an advertising video in Figure 3, which is taken from the video *Air New Zealand: An Unexpected Briefing*. This advertisement features a number of visual and audial elements from the movie of “The Lord of the Rings” (elves, orcs, dwarfs, hobbits, and the characteristic musical theme in the background) to stand for New Zealand (i.e., the country in which the film was made). The metonymy FILM FOR LOCATION takes advantage of the popularity of a cultural reference (the film) to give new prominence to this particular subdomain in representations of New Zealand. The creative reversal of viewers’ expectations in terms of typical images of New Zealand (which might normally involve, for example, sheep and green fields) is designed to make them see New Zealand in a new light. This use of metonymy leads to the metaphor of a flight as a quest. Again, there is a conceptual incongruity which needs to be resolved – although Lord of The Rings might serve as a shorthand for New Zealand for some, the situating of the characters from the film on a modern-day airplane alongside ordinary passengers requires resolution. This

is achieved through activation of the resemblance metaphor which relates a flight to New Zealand to a Lord of the Rings-style quest, albeit a much less adventurous one: it invites the inference ‘It would all have been so much easier if they had simply taken the plane’. There is a gentle irony in this message, and to this trope we now turn.



Figure 3. Still from “Air NZ: An unexpected briefing”

2.2 Making creative use of the contrast between two realities: Irony and unmarked contrast

Irony is a figure of speech and thought that involves a deliberate violation of expectations, thus evoking a contrast between expectation and reality (Gibbs, 2000, p. 13). The incongruity is intentional, and often leads to humorous and/or malicious communicative effects (Barbe, 1995; Gibbs, 2000; Leggitt & Gibbs, 2000). In advertising, irony is mainly used to provoke a humorous effect and it has been argued that this can increase the appeal of the advertisement (Stern, 1990). The boundaries between humor and irony are often fuzzy: research reveals that they both share similar interpretive mechanisms (Attardo, 2000, 2001; Gibbs & Izett, 2005; Giora, 1995) since the successful interpretation depends significantly on the correct identification of the speaker’s intentions and goals, as well as on the awareness of the clash between scenarios that makes it impossible to understand the utterance in a literal way.

Studies of irony in advertising to date have focused primarily on verbal irony where it has been found to be appreciated, but understandably, only if it is fully understood (Lagerwerf, 2007). *Verbal irony* involves the use of words to mean something different from what a person actually says (Alotaibi, 2017; Burgers, van Mulken, & Schellens, 2011, 2012; Canestrari, Bianchi, & Cori, 2018; Filik,

Brightman, Gathercole, & Leuthold, 2017; Utsumi, 2000). For example, in “‘He’ll be furious. Thanks a lot.’ Tremayne said repressively” (British National Corpus). Tremayne is not in fact thanking his interlocutor, rather the opposite. An example of verbal irony can be seen in the still from *Skoda Fabia – Attention test* shown in Figure 4a, b. This advert invites viewers to participate in an attention test in order to prove that the design of the new Škoda Fabia is so “attention stealing” that viewers will not be able to spot all the changes that are being introduced in the background. The test is introduced by a voiceover that asks viewers: “Will the 17-inch black alloy wheels stop passers-by in their tracks? Will the angular headlights attract the attention of other road users? Will a crowd gather to check out its fresh sporty look?” (Figure 4a). This can be interpreted as a case of verbal irony, as the advertisement clearly shows that no one is gathering around the parked car, but rather, passers-by ignore the parked car. Indeed, the speaker in the voiceover ends up acknowledging the fact that he might have exaggerated the “attention – stealing” power of the car by saying: “Well, not quite” (Figure 4b). However, later it is shown that the whole background has changed during the course of the advertisement,



a.



b.

Figure 4. Stills from “*The new ŠKODA Fabia Attention Test*”

proving that the car is able to attract the viewers' attention after all. The creative component of the video derives from the unnoticed and unexpected background change rather than from the verbal irony per se.

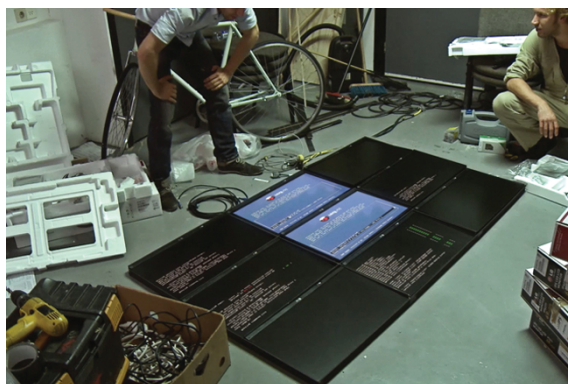
Situational irony involves a discrepancy between what is expected to happen and what actually happens (Dynel, 2017; Colston and Gibbs, 2007; Lucariello, 1994; Shelley, 2001). It also includes coincidences, counterfactuals, and shifts in focus (Dancygier & Sweetser, 2012; Filippova, 2014; Roesse & Olson, 1995). For example, the advertisement of "*Evian: Baby and me*" shown in Figure 5 shows a man walking along a street looking attractive, confident and rather pleased with himself. He catches sight of himself in a shop window. Surprisingly, the reflection that he sees does not depict him as an adult but as a very young child. When he sees this, his reaction is to start dancing with his reflection. The video continues with the arrival of several other adults who first see the adults dancing, think it is odd, then see their own reflections in the window and start dancing themselves. Two expectations are violated in this video. Firstly, there is an unexpected and creative contrast between the adults' views of themselves and the reflections they see in the mirror, and secondly upon seeing these reflections their reaction is to start dancing, oblivious to passers-by (who in turn see their own reflections and start dancing). The combination of these two violations means that we have humorous situational irony running right through the video.



Figure 5. Still from "*Evian: Baby & me*"

Finally, *dramatic irony* is said to occur when the viewer is equipped with a piece of information that one of the characters in the narrative is unaware of, thus placing them a step ahead of that character. Dramatic irony is often present in televised pranks, where the viewer knows about the prank but the subject of the prank does not. There is thus a creative juxtaposition of the viewer's knowledge

and expectations and those of the protagonist. Possessing this kind of information creates a sense of “anxiety” in the viewer as he or she does not know when the person subject to the prank will find out about it, and how he or she will react to it. We can see an example of this in the case of the “LG: So Real It’s Scary” shown in Figure 6. Only the organizers of the prank and the viewers are aware that the base of the elevator is made of screens, and thus that the accident is just an illusion. The humorous effects arise from the fact that the people subject to the prank think that they are going to fall down the elevator shaft, and this increases the sense of expectation in the viewer.



a.



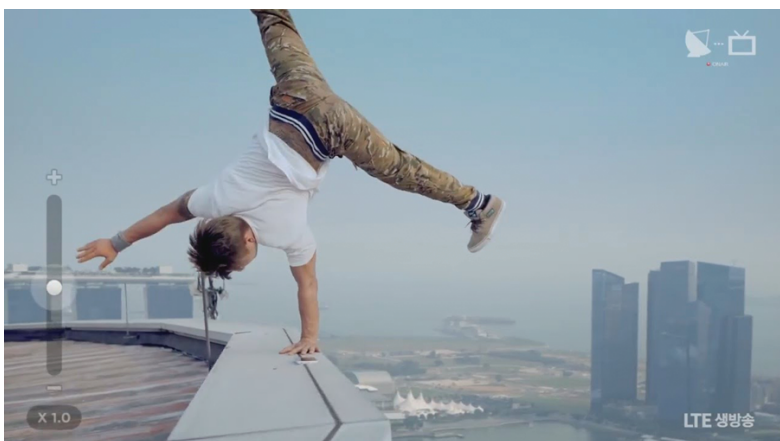
b.

Figure 6. Stills from “LG – So Real It’s Scary” (preparation and execution of the prank)

As with creative metaphor and metonymy, all three types of irony are designed to involve a degree of conceptual incongruity whose resolution results in feelings of satisfaction and possible part-ownership of the message.

We also identified a separate category for all cases featuring any kind of contrast that did not involve any of the figurative operations mentioned above. An example of *unmarked contrast* can be seen in the advertisement “LG camera – Gamblerz Crew” (Figure 7a, b). The video opens with a young boy doing a headstand on the

roof of a skyscraper in Singapore (Figure 7a). The fact that the video opens in mid action is designed to create a sense of anxiety in the viewer given that there are no clues as to why he is doing such risky acrobatics in such a dangerous spot. All of a sudden, the advertisement fades to black and resumes right at the beginning of the day, when three boys (including the one that opened the advertisement) land at Singapore airport and film themselves leaving the airport (Figure 7b). In our view, there are no pragmatic effects triggered by the juxtaposition of these two contrasting scenes. Rather, the abrupt gap between these two moments in the day increases the need for viewers to fill the missing information, and therefore, it encourages them to continue watching the video. There is a move from one location to another but no conceptual incongruity.



a.



b.

Figure 7. Stills from “LG – Gamblerz Crew”

2.3 Strengthening and mitigating the message: The creative use of hyperbole and understatement

Hyperbole involves the representation of a given state of affairs as being more extreme than it actually is (or in some cases, could ever be) with the goal of strengthening the communicative impact of the utterance on the hearer. When producing a hyperbole such as ‘*The building is now worth a million times its original sale price!*’ (British National Corpus), the speaker strengthens the message to an unrealistic extent (the building is probably only worth five or ten times as much as it was originally worth). Once the hearer realizes the hyperbolic meaning of the speaker’s statement, he or she must consequently mitigate it in order to access the message and will correlate the intensity of the hyperbole with the speaker’s intention to impress. Hyperbole creates a sense of shared understanding between speakers as both the speaker and listener need to ‘enter a pact of acceptance of extreme case formulations, the creation of impossible worlds, and/or apparent counterfactuality’ (McCarthy & Carter, 2004, p. 149). McCarthy and Carter’s corpus evidence shows that, in conversation, hyperbole frequently co-occurs with items such as markers indicating shifts in footing (e.g. “so”...), listener acceptance tokens (such as “yeah, mm, and so on”), laughter, and listeners’ own further contributions to the emerging hyperbolic context. Moreover, hyperbole has been shown to trigger emotional responses in the reader/listener, have a strong persuasive component, and serve as a basis for humor (Claridge, 2011).

All of this suggests that in the context of internet marketing videos, the use of hyperbole may help to develop a closer, more intimate, light-hearted relationship with potential consumers. We can see an example of the creative use of hyperbole (combined with a situational irony) in *Figure 8* which is a still taken from an advertisement for Doritos. In this video, a foetus responds to its father moving a Dorito crisp from side to side to such an extent that when the mother throws it away in exasperation, the foetus follows it and exits the womb. There is a strong set of assumptions here, at least in Western cultures that during an ultrasound scan, people will behave in a particular way. The couple will be excited to see their baby, they may become a little emotional, but above all, they will be completely absorbed in the moment. In this video, these expectations are completely turned on their head when the father-to-be starts eating Doritos, and then plays with the foetus by moving a Dorito backwards and forwards, encouraging the foetus to imitate the movements. This makes his wife very angry, while the (female) doctor simply rolls her eyes in sympathy. Finally, the mother-to-be throws the tube of Doritos across the room, causing the foetus to fly out of the womb in pursuit of it, and everybody screams. The conceptual incongruity here derives from the fact that the father is not behaving in an appropriate way given the context and from the fact

that the foetus flies out of the womb in pursuit of the Dorito, which would never happen in real life,

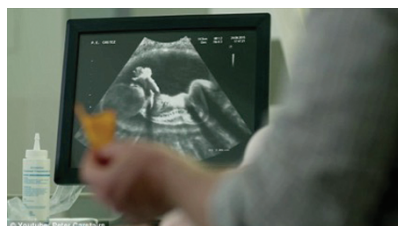


Figure 8. Still from “Doritos – Ultrasound”

Understatement reverses the intention and communicative effects of hyperbole, and thus requires the opposite figurative adjustments on the part of the hearer. The speaker scales down a given state of affairs, sometimes (but not always) with the aim of reducing the potential emotional impact of the situation. For example, one might use the understatement, “they can drink *a bit* too much” (British National Corpus) to mean that a person regularly drinks too much alcohol. No research to date has investigated its role in advertising but given its close relationship to irony (with some researchers, such as Gibbs, 2000, seeing it as a type of irony) one might expect it to contribute to rhetorical effectiveness. An example of the creative use of understatement in an internet marketing video can be found in the advert for *Pepsi Max* shown in Figure 9a, b. This example features a contest between two men (each of whom represents two well-known competing soft drink brands) to build the best arrangement of soft drink cans in a supermarket. The complexity of the arrangements escalates until the man sponsoring the promoted brand builds an impressive castle made of cans, which includes fireworks and a famous rap singer sponsoring the brand (Figure 9a). In light of such a clear victory, he mitigates



a.



b.

Figure 9. Still from “Pepsi Zero – Snoop Dogg”

his win by simply stating “we’re good” (Figure 9b), which simply means “we’ve finished”. Normally, as we said above, understatement is used to comfort people but this particular example also contains an element of irony, as there is a strong incongruity between the impressive outcome and the understated verbal reference; the intention is to make the Coke’s representative feel worse rather than better. Here the conceptual incongruity derives from the contrast between the dramatic display and the low-key response of its designer.

3. Variables for video success: Density, coverage, and positioning

In our study, we chose to focus on the density, coverage and positioning of these different types of figurative communication with internet videos, and to explore whether any of these factors related to their success. Here we explain why we chose to focus on these particular factors. The study itself is described in Section 4 below.

3.1 Density

As we can see from some of these examples, figurative operations often occur in combination. This can be accounted for in two ways. Firstly, the condensed nature of the videos means that a complex message has to be conveyed rapidly in just a few seconds. Secondly, the multimodal nature of the videos themselves allows for several ideas to be expressed simultaneously through different modes of expression.

Given the powerful communicative effects of these different types of figurative operations, one might hypothesize that *figurative density* (that is, the number of overlapping figurative operations) will contribute to the popularity and subsequent viralization of an advertising video. However, because studies to date have only focused on metaphor, we do not yet know what the impact of other figurative operations will be. It could be the case that there is a linear relationship between the density of figurative operations found within the advertisement and its level of popularity. On the other hand, it could be that viewers prefer intermediate amounts of overlapping operations, as low-figurative-density advertisements will not awaken sufficient interest, and high-figurative-density advertisements may demand too much interpreting effort. This hypothesis stems from Giora et al.’s (2004) findings for metaphor, which led to the formulation of the *Optimal Innovation Hypothesis*. This leads us to our first research question and hypothesis:

Research question 1: Is there a relationship between the number of views that an internet marketing video receives and the number of figurative operations it contains?

H1. Internet videos with an intermediate figurative density are more likely to be widely shared because it makes advertisements evocative while at the same time inviting inferencing in recognizable ways. Adverts with none or with a lower figurative density will not engage viewers, whereas highly figurative adverts will be deemed too cognitively demanding by viewers; in both cases, lower and higher figurative density will hinder the popularization of advertisement videos.

3.2 Type of figurative operation and coverage

If a relationship is found between the density of figurative operations and the popularity of the videos, the next step is to investigate which of the *different figurative operations* have contributed most strongly to its success. Given the above discussion, all are likely candidates, but it may be that some individual operations, or indeed combinations of operations, are more effective than others. For example, research into more traditional forms of advertising has shown that a combination of metaphor and metonymy makes advertisements more appealing and more readily understood (Pérez-Sobrino, Littlemore, & Houghton, 2018). It may also be the case that irony, hyperbole and understatement work well together to improve the rhetorical force of an advertisement. Finally, figurative operations that involve explicit contrast (such as resemblance metaphor) may also potentially contribute to the success of Internet advertisements.

Previous studies have shown that hyperbole and irony often co-occur, with some researchers (Gibbs, 2001) referring to hyperbole as a type of irony. There are a number of factors that lead us to predict a high level of effectiveness for advertisements that contain a combination of irony and hyperbole. In all the cases identified in our corpus, the hyperbolic use of irony had a humorous effect. This derives from a violation of Grice's maxim of manner along with a violation of expectations and the presence of a strong contrast between expectation and reality (Attardo, 2001; Colson, 2002).

The medium of video makes it particularly easy to create rich familiar scenes, which suggest strong sets of expectations, which are then violated for ironic effect. We can see a good example of this in the ultrasound scene that was used in the Doritos advert discussed above. The eating of Doritos during an ultrasound scan goes against conventional behavior in such a setting and the fact that the woman is so frustrated with her feckless husband evokes the idea of human frailty, which is a key component of irony under some definitions (Lucariello, 1994). The contrast between what one would expect to happen and what actually happens builds and builds until eventually the baby comes flying out of the womb, which is both unexpected and hyperbolic. The humour evoked by this video gradually changes from

the sort of wry humor that one might normally associate with irony to the sort of big ‘belly-laugh’ humor that is more normally associated with slapstick comedy. This leads us to our second research question and hypothesis:

Research question 2: Do certain figurative operations, or combinations of figurative operations, contribute more strongly to the success of an internet marketing video?

H2. Adverts featuring combinations of irony and hyperbole are more likely to be popular because they introduce an element of surprise in the audiovisual narration (Baack, Wilson, & Till, 2008; Dahlén & Edenius, 2007; Maniu & Zaharie, 2014; Smith, MacKenzie, Yang, Buchholz, & Darley, 2007). An additional ingredient that is likely to play a role in viralization is embodiment, because it makes the connection between the advert and the viewer’s lived experiences more accessible. We thus expect to find a great presence of cor-relational metaphor among the most viewed videos.

Given the multimodal nature of internet marketing videos, one needs to consider the *mode of expression* within which the figurative operations appear. All of the figurative operations listed above can appear in language, images and music and the makers of these videos exploit all of these modes of expression. It would thus be interesting to see whether figurative language was more effective when they occurred within different modes of expression (and if so, of which type), or different combinations of modes of expression (e.g. words and music, images and music, words and images). Pérez-Sobrinho (2018) has already explored the role played by figurative operations in music. She argues that musical versions of metonymy, metaphor, hyperbole, and irony may fulfill different communicative functions. For example, musical metonymy is useful to reinforce the identification and recall of a character of a story (the cat theme in Prokofiev’s *Peter and the Wolf* helps listeners to understand when the cat is back in the story just by playing a few notes from the theme). Musical hyperbole, in turn, enhances the emotional power of certain musical pieces (such as the feeling of mourning in Pärt’s *Requiem for Benjamin Britten*). Viral marketing videos provide the analyst with an opportunity to investigate the ways in which figurative operations operate and interact within words, music and images to achieve particular communicative effects. Given the findings cited above for metaphor, we predict that figurative messages that appear in images, or in several modes at once, will be more powerful than those that appear only in words. This leads us to our third research question and hypothesis:

Research question 3: Do some modes representing or conveying figurative meaning contribute more than others to the success of an internet marketing video?

H3: We expect images to play a predominant role in the popularization of Internet videos. Thus, images alone or its combination with words or music are likely to increase the views of Internet adverts.

3.3 Positioning

Finally, the likelihood of an advertisement going viral may also be related to the *positioning* of the figurative operations throughout the advertisement’s timeline. Studies of the so-called ‘serial positioning effect’ (Broadbent & Broadbent, 1981; Ebbinghaus, 1913) have shown that information presented at the end of a list or process is more readily remembered than information presented in the middle of a list or process, as its positioning renders it more salient. It might therefore be the case that concentrations of figurative density at either the beginning or the end of an advertisement will make it more likely to engage consumers (Li, 2010; Loginova, 2009; Peters & Bijmolt, 1997). This leads us to our fourth, and final research question and hypothesis:

Research question 4: Does the positioning of the figurative operations make a difference?

H4: We anticipate that the clustering of figurative operations towards the beginning and/or the end of the advertisement might contribute to the number of views because it might make the advert more likely to be perceived as innovative and worth viewing.

Figure 10 offers an overview of the main working hypotheses driving this study.

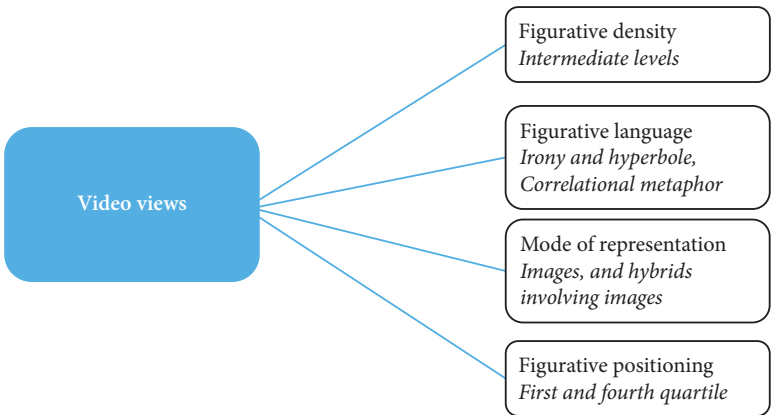


Figure 10. Summary of the working hypotheses of this study

4. Methodology

In order to answer these research questions, we collected a corpus of 35 video advertisements from YouTube with differing levels of popularity and coded them for the different figurative operations outlined above. The language used in all adverts was English and all adverts were released for the first time in the US market.

We calculated for each video, the density of the figurative operations, the different kinds of figurative operation involved, the positioning of the figurative operations, and the number of views that the videos had received. We conducted statistical analyses to investigate which, if any of these variables, served as predictors of the video's success.

a. *Selection of the videos*

A corpus of 35 online brand videos was selected from YouTube. The videos represented a wide range of brands and products. The *number of views* ranged from 1,728 to 115,904,727. Given that our goal was to investigate whether there is a significant relationship between figurative operations and the degree of success of online branded content videos, we took the *number of views* per day and aggregated over time of each video (as per each video's data on YouTube) as a proxy for video success. The rationale for our decision to use the number of views is that it has ecological validity, as high viewing figures is one of the main aims of the producers of these videos.

b. *Annotation of the videos*

We first transcribed each of the 35 videos and imported both the advertisement and the transcription into NVivo (<http://www.qsrinternational.com/nvivo/nvivo-products>). We then split them into smaller units of analysis. Our cut-off points were identified at the sentence level in the transcription and when visible changes occurred in the visual content. We also added the exact time span for each unit (in milliseconds) in order to provide a measure of the exact coverage of each unit with respect to the total duration of the advertisement. Each unit was later coded for figurative operations (resemblance metaphor, correlational metaphor, metonymy, hyperbole, understatement, verbal irony, situational irony, dramatic irony, and unmarked contrast) and for the use of modes (verbal, visual, audial, and their hybrids).

The size of the corpus, plus the inherent complexity of audiovisual examples and of our own annotation scheme, meant that it was difficult to code the examples on an individual basis. In order to ensure an acceptable degree of consistency in the identification of the nature and positioning of the figurative operations at play, two researchers jointly coded and annotated each of the 35 advertisements.

Controversial cases were therefore resolved through discussion. A third expert was brought to decide in ambiguous cases until 100% of agreement was reached.

4.1 Variables observed in this study

The next stage of the study involved generating count data for each of the observed variables.

- a. *Density (total number of figurative operations in the video)*: figurative density was calculated by adding the number of figurative operations occurring in each video. For example, in Figure 11, there were five figurative operations (visual irony, visual hyperbole, visual metonymy, verbopictorial irony, and verbal contrast).

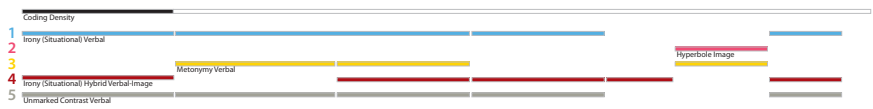


Figure 11. Figurative density in “The man your man could smell like”

- b. *Coverage (length of each figurative operation across the video’s timeline)*: figurative coverage was retrieved from NVivo. The software shows the percentage of the timeline covered by each figurative operation. For example, in Figure 12, situational verbal irony (in pink) covers two segments of the advertisement of 70.96% and 6.71% each, whereas visual hyperbole (in blue) covers 6.96%.

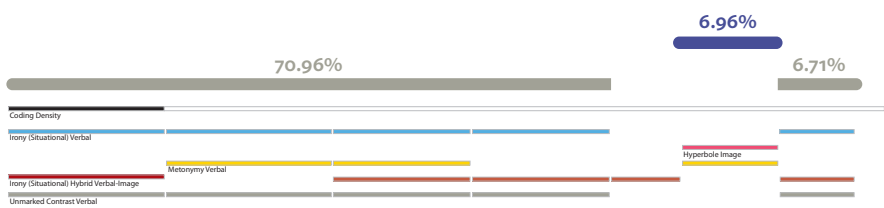


Figure 12. Figurative coverage in “The man your man could smell like”

- c. *Positioning*: In order to obtain count data for figurative positioning, each video was split into quartiles and each quartile was subdivided into four sections. We then counted the number of figurative operations that were contained within each of the four quartiles. We added these together to obtain the number of figurative units per section. For example, in Figure 13, the first quartile contains 12 figurative units, the second quartile contains 14, and so on. For the sake of illustration, the number 14 in the second quartile results from adding together 4 units of verbal situational irony (pink), 4 units from

verbal metonymy (yellow), 2 units of verbopictorial situational irony (green), and 4 units of unmarked verbal contrast (purple).

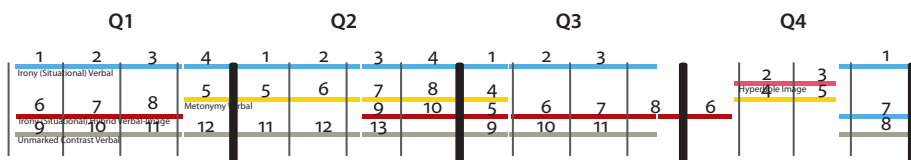


Figure 13. Figurative positioning in “The man your man could smell like”

4.2 Data analysis and statistical procedures

We used the R statistical programming environment (v3.4.0; R Core Team, 2017) for statistical analyses. We were able to fit our data into Poisson linear models because we collected count data in all cases (number of overlapping figurative operations for *Research Question 1*; percentage of figurative operation coverage for *Research Question 2*; percentage of mode coverage for *Research Question 3*; and units of figurative operation for *Research Question 4*).

We first implemented a *Test for Overdispersion* using the function *dispersion-test()* in the package AER (Cameron & Trivedi, 1990). Overdispersion can bias both the means and standard errors of parameter estimates and this needs to be controlled for when fitting the regression model (Hilbe, 2011). The results suggested evidence of overdispersion (c estimated to be 49836). A common way to cope with overdispersion in count data is to introduce observation-level random effects in the model, i.e., a unique level of a random effect that models the extra-Poisson variation present in the data (Harrison, 2014).

Our Poisson models have a similar structure in all the ensuing sections. Our predictors are the *total number overlapping figurative operations* in Research Question 1, the *coverage of the different types of figurative operations (%)* in Research Question 2 (in isolation and in combination, as we will show), the *coverage of the different modes of representation (%)* in Research Question 3 and the *total number of figurative units* in each of the four quartiles of the advertisement timeline in Research Question 4. These predictors are modeled against the number of views per day, as we understand this to be the clearest index of viralization of a video. We also checked for significance against the aggregated number of views for each of the videos over the time they have been available in YouTube, as an alternative way of measuring the popularity of the videos. Finally, as mentioned above, “advert” was entered as a random effect in all models. We used the packages lme4 (Bates, Mächler, Bolker, & Walker, 2015) for generalized linear mixed effects models and MuMIn for computing R^2 values for mixed models (following Nakagawa &

Schielzeth, 2013). All p -values were interpreted by applying likelihood ratio tests (deviance tests) of the model with the effect in question against a null model without the effect in question.

In order to make our study fully reproducible, we have published our data, scripts and the details of the videos collected for this study in a public repository that can be retrieved online: <https://osf.io/f8knh/>.

5. Results and discussion

- a. *Research Question 1: Is there a relationship between the number of views that an internet marketing video receives and the total number of figurative operations it contains?*

Each advert contained on average 4.6 distinct figurative operations occurring at some point of the video. Table 1 shows the mean views per day depending on the total number of figurative operations featured in the advertisement. Except for the dramatic increase of views for 7 figurative operations, the graph shows an almost normal distribution.

Adverts containing seven figurative operations accounted for 33% of the views per day in our corpus and are placed in the eighth decile of the total views per day, that is, they are in the top 20% of adverts more viewed per day. The next group of most viewed adverts is the one that contains four figurative operations (22% of the recorded views per day). Along with adverts featuring three and five figurative operations, they make up for 56,4%, and they are located in the sixth decile of the data, that is, they gained over 60% of the views per day. There was a statistically reliable main effect of the number of figurative operations on views per day on ($\chi^2(1) = 3.989, p = 0.05$).¹ Overall, the mixed effects regression model described 13% of the variation in the number of views per day (adjusted $R^2 = 0.13$).

Table 1. Number of figurative operations featured in the videos and mean number of views scored per day

Figurative operations per advert	1	2	3	4	5	6	7	8
Views per day (mean)	299	10477	24197	33669	29758	3103	51805	2042

This initial exploration of the data leads to a partial confirmation of *H1*. We anticipated that intermediate amounts of figurative operation would make adverts more

1. In lme4 syntax, the following formula was used: `mymodel_figops = glmer (Views_per_day~FigOps_total + (1|Advert), data = dynamic, family = "poisson")`

popular, which holds true for adverts containing three, four, and five figurative operations. However, the highly skewed descriptive results show viewers also exhibit a preference towards more complex adverts.

5.1 Do certain figurative operations, or combinations of figurative operations, contribute more strongly to the success of an internet marketing video?

Table 2 shows the mean percentage of the timeline (coverage) that each figurative operation covered in isolation and also in groups of interest as defined in our research hypotheses. Recall here that the percentages are likely to surpass the 100% threshold as we are looking at overlapping figurative operations in the video timeline. Metonymy stands out as the most pervasive type of figurative language in our corpus (72%), followed by situational irony (37%), and correlational metaphor and hyperbole (both 30%). In terms of aggregated values, it should be emphasized that both metonymy and metaphor represent the most prominent types of figurative language in video adverts (72% and 58%, respectively), followed by irony (49%). This makes the category consisting of metaphor and metonymy the most representative of our corpus of adverts (130%). Contrasting operations (involving both irony and unmarked contrast) occur only half as often as metaphor and metonymy (76%), and hyperbole and understatement represent 33% of the corpus.

Table 2. Coverage (%) of each figurative operation of the video timeline – aggregated values per category and individual values per figurative operation

Figurative operations	Coverage video timeline (%)
Metonymy	72
Situational irony	37
Resemblance metaphor	30
Hyperbole	30
Correlational metaphor	28
Unmarked contrast	27
Dramatic irony	8
Verbal irony	4
Understatement	3

Despite the strong presence of metaphor and metonymy in the corpus, no reliable effect was found for metonymy or metaphor, either in isolation or in combination, on views per day or on the aggregated number of views over time. This means that both popular and unpopular adverts were equally likely to contain a great degree of metaphorical ad/or metonymic figurative language. However, an effect was found for all three types of irony plus unmarked contrast; $\chi^2(4) = 11.242$, $p = 0.02$)² in the popularization of videos in the Internet, which explained 32% of the variation in the data (adjusted $R^2 = 0.32$). In addition to this, the combination of the three types of irony studied, unmarked contrast, hyperbole and understatement³ was found to border statistical significance in a reliable manner ($\chi^2(6) = 12.06$, $p = 0.06$). This suggests that the combination of exaggeration with conflicting scenarios in video adverts might also be related to the increase of views of Internet adverts. However, hyperbole and understatement did not report any significant effect on the number of views.

When breaking down the model to look at the specific contribution of each figurative operation to the number of views, a reliably statistical effect was detected for irony (including dramatic, situational, and verbal)⁴ on the aggregated number of views ($\chi^2(3) = 9.3466$, $p = 0.03$) and this explained 27% of the variance (adjusted $R^2 = 0.27$). Moreover, our analysis of the effect of dramatic irony on the total number of views yielded similar significant results ($\chi^2(1) = 4.1678$, $p = 0.04$).⁵ This accounted for 13% of the variance (adjusted $R^2 = 0.13$) and explains why irony predicted such a high number of views.

These results partially confirm *H2*. Our findings show that adverts are more often viewed when they feature a dramatic irony. In addition to this, figurative operations with an intensifier effect (such as hyperbole) or a mitigating effect (such as understatement) seem to reinforce the irony. On the other hand, and contrary to what we expected, correlational metaphor was not found to have an effect on the number of views.

2. In lmer syntax: `mymodel_conint = glmer (Views ~ IronyDramatic + IronySituational + IronyVerbal + UnmarkedContrast + (1|Advert), data = dynamic, family = "poisson")`

3. In lmer syntax: `mymodel_conint = glmer (Views ~ IronyDramatic + IronySituational + IronyVerbal + UnmarkedContrast + Hyperbole + Understatement + (1|Advert), data = dynamic, family = "poisson")`

4. In lmer syntax: `mymodel_i = glmer (Views ~ IronyDramatic + IronySituational + IronyVerbal + (1|Advert), data = dynamic, family = "poisson")`

5. In lmer syntax: `mymodel_idram = glmer (Views ~ IronyDramatic + (1|Advert), data = dynamic, family = "poisson")`

5.2 Do some modes of figurative operations contribute more than others to the success of an internet marketing video?

Table 3 shows the average coverage of each of the modes of representation of interest in this study, both in their monomodal and hybrid format. Images, first in combination with words and then in isolation, are the most usual modes of figurative representation in Internet advertising videos (79% and 68%, respectively). Figurative communication in the spoken word is also present in our data, yet to a lesser extent (48%). By contrast, the potential of music to convey figurative meaning does not seem to have been fully exploited in our corpus: only 17% of the video content conveyed figurative meaning through the music alone. Music was more likely to occur in combination with images (25% of our corpus).

Table 3. Coverage (%) of each mode of representation of the video timeline – aggregated values per category and individual values per mode of representation

Modes of representation	Coverage video timeline (%)
MONOMODAL	133
Images	68
Words	48
Music	17
MULTIMODAL	104
Images & Words	79
Images & Music	25
Words & Music	1

Neither monomodal nor hybrid modes, as overarching categories, had a significant effect on the number of views. A closer look at each of the six possible combinations of mode representation revealed that only the combination of figurative images and words had a reliable significant effect on the number of views per day⁶ ($\chi^2(1) = 366.2, p < 0.0001$), which explained 12% of the variance (adjusted $R^2 = 0.12$). This effect is mostly due to the tight connection between popular videos and dramatic irony, which was the only figurative operation featuring words and images that showed a reliable effect on its own ($\chi^2(1) = 4.1724, p = 0.04$). This result supports *H3* and gives further credence to the idea that when figurative images occur in combination with other figurative modes of expression (such as words), they are more likely to engage viewers.

6. In lmer syntax: `mymodel_imawords = glmer (Views_per_day ~ Images_words + (1|Advert), data = dynamic, family = "poisson")`

5.3 Does the positioning of the figurative operations make a difference?

Finally, Table 4 shows the average number of figurative units in each of the four quartiles of the advert. The highest density in terms of figurative units (regardless the type of figurative operations) was concentrated around the third quartile of the timelines (17 figurative units on average), closely followed by the second quartile (15 figurative units on average). The beginning and the end of the Internet videos in our corpus contained the lowest numbers of figurative units (12 figurative units on average in both cases), thereby showing that the adverts in our corpus usually displayed figurative complexity towards the middle of the timeline.

Table 4. Mean values of figurative units in each of the four quartiles of the video timeline

Timeline of adverts (quartiles)	Coverage (mean figurative units)
Q1	12
Q2	15
Q3	17
Q4	12

In spite of our expectations, no reliable effect was found for figurative positioning on the number of views per video, both in views per day and in aggregated views over time. Figurativeness in the first quartile was found just to border significance⁷ ($\chi^2(1) = 3.1086, p = 0.07$) but we cannot fully discard the null hypothesis in the light of these results. This leads to a rejection of *H4*, as the results do not show any relevant effect of the positioning of the figurative operation in the advert on the number of views in our data.

6. General discussion

Given the potential for creativity and the powerful persuasive effect of figurative operations, we conducted a study that aimed to establish whether there was a relationship between different figurative operations and the popularity of online branded content videos. We were particularly interested in establishing the role played by *figurative density* (i.e. number of co-occurring figurative operations), the *type of the figurative operations* in such videos (metonymy, metaphor, irony, hyperbole and understatement), the *modes of representation* (images, words, music, and

7. In lmer syntax: `mymodel_segment1 = glmer (Views ~ Segment1_FigUnits + (1|Advert), data = dynamic, family = "poisson")`

their combinations), and the *positioning* of figurative operations within the videos (in the first, second, third, and fourth quartile of the video timeline).

We have seen that the number of figurative operations at work was related to the number of views. Videos featuring intermediate numbers of overlapping figurative operations (from three to five) were more likely to have had more views. A tendency towards a preference for complex forms of creativity in videos (featuring up to seven figurative overlapping figurative operations) was also observed. This suggests that the viewers may have appreciated the intrinsic richness afforded by this particular mode of expression. In terms of figurative operations, irony (in particular, dramatic irony) was significantly related to the number of views received by the video. Regarding the use of the modes to represent the advertisement, it was the combination of images with words that led to the highest number of views. More specifically, it was the combination of these two modes in dramatic irony that contributed most strongly to this effect. Finally, we did not find empirical support for the idea that the place on the timeline where these figurative operations occur has a significant effect on the popularity of the videos. Figure 14 provides an overview of the main findings reported in this study.

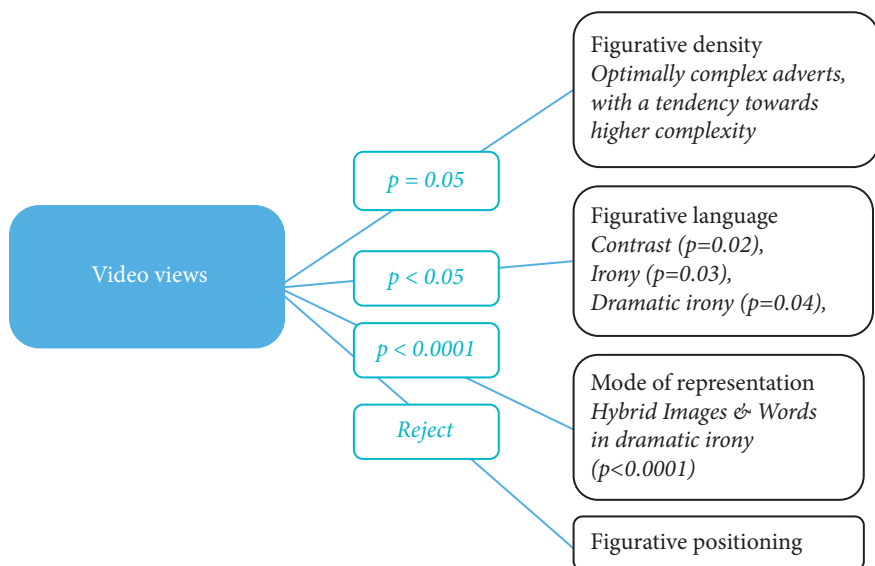


Figure 14. Summary of the main working hypotheses driving this study

These findings suggest that figurative operations in multimodal use are strong predictors of the success of internet marketing video campaigns, but that not all figurative operations are equally powerful. Moreover, our study shows that it may not always be sufficient to focus simply on metaphor, and that more research effort should be put into examining the role played by other types of figurative

communication, such as hyperbole and irony, as these are likely to attract and retain the attention of the viewer as well as performing subtle persuasive functions.

There are a number of avenues where potentially useful further research could be conducted in this area. An area in need of development is finding the links between humor studies and the myriad theories dealing with multimodal creativity and figurative language. As argued elsewhere, both humor and figurative operations (especially irony) are built on the same interpretive grounds, and it would be useful to investigate the extent to which they overlap and/or complement each other to build a more integral theory of persuasive communication. In addition to this, we have touched on the role of emotion as a possible mediator between multimedia creativity, figurative operations and video popularity. It would be interesting to investigate the nature of the emotions provoked by these figurative operations and explore whether the triggering of particular emotions is related to the success of the videos. One of the most popular dimensional models for the study of emotions, which could be used in this research is PAD (Pleasure; Arousal; Dominance). Each of these constitutes a continuum along which emotions are thought to vary. Future studies could usefully pursue this line of research by interviewing viewers about their emotional responses to the videos using PAD as a framework.

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Secondary sources: Advertisements

Figure 1. Old Spice – Watermelon. Retrieved on October 2019: <https://www.youtube.com/watch?v=5Y0CaCn-hd8>

Figure 2. Dove – Choose beautiful. Retrieved on October 2019: <https://www.youtube.com/watch?v=W07P3i5Yaak>

Figure 3. AirNZSafety – An Unexpected Briefing. Retrieved on October 2019: https://www.youtube.com/watch?v=cBlRbrB_Gnc

Figure 4. The new ŠKODA Fabia Attention Test. Retrieved on October 2019: <https://www.youtube.com/watch?v=qpPYdMs97eE&t=2s>

Figure 5. Evian – Baby Me. Retrieved on October 2019: <https://www.youtube.com/watch?v=ikuiByrF6rs&t=>

Figure 6. LG – So Real it's Scary. Retrieved on October 2019: <https://www.youtube.com/watch?v=NeXMxuNNIE8>

Figure 7. LG – Gamblerz Crew. Retrieved on October 2019: <https://www.youtube.com/watch?v=XzeYKLBsQvA>

Figure 8. Doritos – Ultrasound. Retrieved on October 2019: https://www.youtube.com/watch?v=Qh_gOK6xDNA

Figure 9. Pepsi Zero – Snoop Dogg. Retrieved on October 2019: <https://www.youtube.com/watch?v=-ePJ3YA2vSc>

Metaphorical creativity in political cartoons

The migrant crisis in Europe

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This paper aims to explore the discursive construction of political meaning in cartoons on the present migrant crisis in Europe, and the potential of cartoon discourse for creativity in the use of metaphor and blending. Metaphors, blends and cultural models interact in the representation of events and social actors in cartoons, and the resulting synergistic effect may create meanings which both reflect and reinforce or reshape public opinion (Bergen, 2004; Marín-Arrese, 2008; Forceville, 2009; Schilperoord & Maes, 2009). From a Cognitive Linguistic approach to Critical Discourse Analysis (Charteris-Black, 2006; Hart, 2010; Musolff 2012a), the paper focuses on the use of metaphors and other cognitive mechanisms, and the ways in which political cartoons provide the ideal site for metaphorical creativity as recontextualization (Hidalgo Downing & Kraljevic Mujic, 2013).

Keywords: metaphor, blending, cultural models, creativity, recontextualization, political cartoons

1. Introduction

This paper aims to explore the discursive construction of political meaning in cartoons on the present migrant crisis in Europe, and the potential of cartoon discourse for creativity in the use of metaphor and blending. Two dimensions of meaning construction are central in political cartooning: the representation of events and social actors through the pictorial and multimodal depictions, and the political butt or critical stance expressed in the cartoon (cf. Forceville, 2009; Schilperoord & Maes, 2009). Representations in cartoons interact with cultural models to yield various metaphor-blend-model combinations, and serve to challenge or reinforce readers' beliefs or points of view on specific socio-political issues as well as their social and cultural attitudes (Bergen, 2004; Marín-Arrese,

2008; Musolff, 2012a). Critique in political cartoons may thus both reflect and reinforce or reshape public opinion. The combination of the emotional power of the cartoon together with the critical analysis of social and political issues creates a highly complex message, and serves to reinforce or challenge social, cultural, and political practices (Ginman & von Ungern-Sterberg, 2003).

The creation and interpretation of cartoons provides a source of evidence for the creative use of cognitive mechanisms, such as reference-point organization and metonymy (Brône & Feyaerts, 2003), metaphoric reasoning (Lakoff & Johnson, 1999) and conceptual integration or blending (Fauconnier & Turner, 2002), and of cultural models (Holland & Quinn, 1987). As Bergen (2004, p. 24) has convincingly observed, “Since political cartoons use these functions in a different modality from the conventional linguistic one, the discovery of the use of common metaphors, blending strategies, and cultural models in language and in editorial cartoons can serve to confirm the non-linguistic nature of these cognitive mechanisms”.

This paper seeks to examine the ways in which political cartoons provide the ideal site for metaphorical creativity as recontextualization, that is, as the “capacity of metaphor to act as an instrument that adapts already existing or familiar concepts and experiences, in order to yield new meanings and new experiences” (Hidalgo Downing & Kraljevic Mujic, 2013, p. 134; Kövecses, 2005; Semino, Deignan & Littlemore, 2013).

The paper further takes the position that there is a dialectical relation between discourse as language use, as social action and as the construction of knowledge about social reality, in line with the perspective of Critical Discourse Analysis (Charteris-Black, 2006; Hart, 2010; Musolff, 2012a). Political cartoon discourse often draws on representation and (de-)legitimization strategies for the discursive construction and evaluation of social actors or events, through membership categorization, metaphors and metonymies, and other forms of allusions or evocations (Wodak & Meyer, 2015). The paper focuses on the representation of the phenomenon of migration itself, and of the main social actors and entities involved: the migrants, the European Union and European politicians and EU citizens.

A representative sample of cartoons has been compiled from specialized web sites in Europe and the USA, and also selected from quality newspapers published in the UK and Spain, together with the corresponding items of news, with the aim of revealing: (a) the extent to which we find the use of common metaphors, blending strategies, and cultural models, in the depiction of social actors, phenomena and events in the cartoons and in the language of the media and politics; (b) the forms of creativity as recontextualization in the expression of political commentary by professional cartoonists in quality newspapers; and (c) the role of critique in cartoons in challenging standard claims, issues and policies in EU

discourse and in the discourse of the media, and in highlighting or in hiding the inconsistencies of social conventions, prejudices, and the inadequacy of political decisions and practices.

2. Metaphor and creativity in political cartooning

2.1 Humor in political cartooning

Humor is a complex multi-faceted phenomenon, involving emotional factors and cognitive mechanisms. Theories of humor can be grouped according to three basic accounts of the mental and psychological processes that give rise to humor: ‘Release and Relief’ theories, involving arousal-relief mechanisms (Freud, 1905); Superiority theories which focus on self-assertion and other-disparagement strategies (Gruner, 1997); and Incongruity-Resolution theories (Suls, 1972).

Linguistic theories of humor have generally centered on the bisociation of two frames of reference, or the overlap between two opposing scripts and the abrupt shift from one to the other script, triggered by ambiguity or contradiction (Raskin, 1985; Attardo, 1994). Attardo (1997) proposes a three-stage model of humor, which consists of a *setup* phase, where the interpreter builds some expectations which are ‘congruous’ and compatible with some discourse world; the *incongruity* phase, where the interpreter becomes aware of some divergence from his/her expectations, and looks for an alternative script, thus accessing two scripts in opposition, the first is a highly accessible script and the second one is characterized by low accessibility and high informativeness; and the *resolution* phase, where the incongruity is resolved through the logical mechanism of the joke. Characteristically in jokes an initial unmarked salient context or representation is found to be incongruent with the punchline, which typically provides a lexical cue that triggers the shift to an alternative non-salient context and to the intended interpretation in the resolution process (Raskin, 1985; Attardo, 1994). In her discussion of joke comprehension, and relative accessibility of a particular meaning in a certain context, Giora (2003, pp. 168–170) examines the role of salience (familiarity, frequency, conventionality, and prototypicality), and argues that jokes “tend to involve some salience imbalance that invites the comprehender to process the more salient but eventually incompatible meaning first”. This initial interpretation is retained until a sudden incongruity forces the comprehender to abandon the contextually incompatible meaning and “activate a less salient but congruent meaning”. That is, comprehension crucially involves reinterpretation, or “revisitation of initially activated concepts”.

Koestler (1989, p. 40) uses the terms ‘universes of discourse’, ‘associative contexts’ or ‘frames of reference’ for these contexts or scenarios in the sense of “specific patterns of activity which, though flexible, are governed by sets of fixed rules”, and notes how jokes can be described as “universes of discourse colliding, frames getting entangled, or contexts getting confused”. The interpreter has to fill in the missing links in the situation by “interpolation”, or else to “extrapolate” by recourse to background knowledge, or to reinterpret the situation by means of “transformation” (i.e. “transformation of metaphorical into literal statements, ...”) (Koestler, 1989, pp. 84–5). As we can see, these notions set him out as a clear precursor of mental space theory.

Koestler (1989, p. 52) has also stressed that a necessary catalyst for humor is the presence of “an aggressive-defensive or self-asserting tendency”, however sublimated it may be. “It is the aggressive element, the detached malice of the parodist, which turns pathos into bathos, tragedy into comedy”. From the perspective of moral psychology, McGraw & Warren (2010) conclude that three conditions are jointly necessary to facilitate humor: (i) some violation or breach of norms, taboo content, or hostility and disparagement; (ii) the occurrence in safe, playful or ‘benign’ contexts; and (iii) an interpretative process involving simultaneity, bisociation, or incongruity. McGraw & Warren (2010, p. 2) view humor as an adaptive response, as a positive and socially beneficial way to react to misunderstanding and other benign violations, and posit the ‘benign-violation hypothesis’, which suggests that the above three conditions are “jointly necessary and sufficient for eliciting humor: A situation must be appraised as a violation, a situation must be appraised as benign, and these two appraisals must occur simultaneously”. However, one might argue that rather than a ‘benign’ context, what is crucial is the intentionally created humor frame and the convention of humor as a *non-bona fide mode of communication* (Raskin, 1985), which prepares the interpreter to accept any situation as a possible ‘world’. In fact, the potential of humor as an instrument of dissent and transgression has been repeatedly pointed out in the literature. Speier (1998: 1395) argues that “throughout history, whispered jokes have been safety valves, enabling men to reduce the frustrations inflicted through taboos, laws, and conventions”. As Muller (1978) (In: Nilsen & Nilsen, eds. 1983, p. 191) observes, “Humor is the constant challenge and irritant to the cloak of seriousness with which every power group in the world disguises its attempts at supremacy, monopoly and domination”.

These features of humor are present in political cartoons, which may be used as a weapon, as a form of subversive activity against the dominant ideology, most often directed at the power holders, at particular social groups or institutions, or more abstractly, it may be aimed at specific policies, social norms or values, thus undermining the ‘legitimacy’ of a particular government, regime or institution

(Marín-Arrese, 2005). A political cartoon is a pictorial or multimodal representation which characteristically combines satire and caricature, irony and humor, with metaphor and other cognitive mechanisms in order to convey political commentary regarding some individual or current event. The butt or critical stance of the cartoon may both reflect and reinforce or reshape public opinion (Schilperoord & Maes, 2009). Cartoons literally take place within a frame, which we approach with certain expectations, and certain knowledge and values shared by creators and readers. As Greenberg (2002, p. 183) notes, “Political cartoons operate as frames for the organization of social knowledge insofar as they make use of various rhetorical devices – metaphors, catch phrases, depictions, etc.- that purport to capture the essence of an issue or event graphically”.

The interpretation of the cartoon is, however, not subject to linear processing in the way that a text is; in a cartoon we practically simultaneously access an unmarked or salient ‘world representation’ in juxtaposition with an alternative non-salient ‘world view’, and the incongruity very often results from a discrepancy in expectations regarding social norms, rational behavior, etc.. This resulting cognitive clash triggers a shift from one mental representation to another representation in order to strive for coherence and a relevant interpretation, which, once reached, also provides the mental satisfaction of having solved a puzzle.

2.2 Cognitive mechanisms in cartoons

The cognitive resolution process of humor interpretation in cartoons draws on various cognitive mechanisms: comparison mechanisms such as metaphor and conceptual integration or blending, and selection mechanisms such as profiling, reference-point organization and metonymy. Representations in cartoons also interact with cultural models to yield various metaphor-blend-cultural-model combinations (Holland & Quinn, 1987; Bergen, 2004). Choices in profiling in cartoons serve to either highlight or suppress certain elements in the visual representation, and these elements play a crucial part in accessing alternative scenarios and in the salience imbalance (Giora, 1997, 2003) characteristically involved in cartoon humor (Marín-Arrese, 2008). Salience and novelty are two of the key notions involved in the humor process, as in other innovative forms of discourse, such as metaphor. Giora (2003, p. 175) notes that whereas reinterpretation in jokes involves suppression of the salient incompatible meaning, understanding metaphor “involves retention of salient, though contextually incompatible meanings”.

Brône and Feyaerts (2003, p. 20) have discussed metonymic reasoning as a distinct *unpacking device* in the (partial) resolution of the incongruity as part of the processing of cartoons: “people can metonymically infer complex frames, scripts, scenarios or ICMs, which are stored in long-term memory, by merely

referring to a salient part of that frame”. Whereas metonymy characteristically selects “experientially salient features as reference points”, to combine maximal accuracy with minimal cognitive effort, cases of incongruity-resolution humor are “deliberately construed in function of a *balanced processing difficulty*, involving ‘nonsalient’ reference points as the operational basis for metonymy as a scenario or frame” (Brône & Feyaerts, 2003, p. 24). It would appear that a characteristic feature of one-panel cartoons is the exploitation of non-salient retrieval cues as a “specific humorous strategy of *suppressing* salient elements in a frame or scenario” (Brône & Feyaerts, 2003, p. 31).

In visual and multimodal metaphors there is a juxtaposition of source and target domains; the schematic depiction of source domain scenarios and the mapping of features and relations from source to target provides access to target domain scenarios triggered by some linguistic or visual interpretative cue (Forceville, 2009). In cartoons with no captions, we encounter some form of visually depicted incongruity typically involving some discrepancy or incoherence regarding expected scenarios, rational behavior, etc., and some form of visual interpretative cue which induces simultaneous access to the two juxtaposed discordant source and target domain scenarios. In cartoons with captions, the interpretative cue is characteristically found in the caption, or else there is some form of interaction between a verbal prompt in the caption and some visual interpretative cue, which induces sequential access to the two conceived contexts.

Conceptual integration or blending involves structure and elements from different input mental spaces, linked by cross-space mappings, which are selectively projected onto a new blended space. Emergent structure in the blend is generated through *composition* (the creation of new relations drawing on elements from the input spaces), *completion* (frames and meanings are completed by recourse to background knowledge) and *elaboration* (setting up imaginative simulations) (Fauconnier & Turner, 2002, p. 48). In cartooning, the cognitive clash between the two world representations takes place in the blend, where the interpreter undergoes the cognitive shift by mapping back to the input spaces. In the words of Fauconnier and Turner (2002, p. 333), “at first we recognize a space with incongruities and that those incongruities prompt us to take the space as a blend and look for its inputs”. This triggers the process of unpacking the blend or ‘deblending’ (Kyratzis, 2003), thus accessing a salient unmarked scenario in parallel with an alternative non-salient marked scenario (Marín-Arrese, 2008). This creative process yields unexpected inferential and emotional effects which contribute to the humor appreciation.

2.3 Creativity in political cartooning

This paper explores some features of creativity in the expression of political commentary by professional cartoonists in quality newspapers, basically involving apparently minor variations. Creativity may be conceived as “the ability to produce work that is both novel (i.e. original, unexpected) and appropriate (i.e. adaptive concerning task constraint)” (Sternberg, 1999, p. 3. In: Hidalgo et al., 2013, p. 201). Kövecses (2010, p. 656) defines metaphorical creativity as “the production and use of conceptual metaphors and/or their linguistic manifestations that are novel or unconventional (with the understanding that novelty and unconventionality are graded concepts that range from completely new and unconventional through more or less new and unconventional to well-worn, entrenched and completely conventional cases)”.

Cognitive mechanisms involved in the cognitive resolution process of humor interpretation are highly creative. Brône and Feyaerts (2003, p. 50) argue that the humorous effect “is in some cases achieved through the creative elasticity of a basic cognitive mechanism, in this case metonymy”. Fauconnier and Turner (2002, p. 18) note that conceptual blending is a cognitive operation which is not only “highly creative but crucial to even the simplest kinds of thought”. As Brône and Feyaerts (2003, p. 50) observe,

If basic cognitive construal operations can be found to function in the inferential process of incongruity resolution, this supports the claim that even *full creativity* (Bergen & Binsted, submitted) is subject to general cognitive mechanisms. Instead of focusing on the uniqueness of the humor phenomenon (e.g. in logical mechanisms), a cognitive linguistic account can reveal the way in which day-to-day cognitive capacities are explored and pushed to the limit for humorous purposes.

In line with this notion of full creativity, which involves “the ability to produce and interpret combinatorially novel utterances in novel situations”, Bergen and Binsted (2004, p. 91) note that full creativity “makes use of constructional pragmatics, along with other domain-general mechanisms like imagery and metaphor”. They thus conclude that “full creativity seems to be the product of constrained and structured principles that make use of general purpose cognitive mechanisms”.

Political cartoons provide the ideal site for metaphorical creativity as recontextualization. The use of novel and unconventional metaphor in the discourse of cartoons presumably derives from the combined effect of contextual factors on the discourse. Kövecses (2010, p. 686) suggests that,

We recruit conceptual materials for metaphorical purposes not only from bodily experience but also from a variety of contexts in which we speak, think, and act metaphorically. Since the contexts can be highly variable, the metaphors used will often be variable, novel, and unconventional.

Hidalgo et al. (2013, p. 216) have similarly pointed to the influence of context on novel and creative uses of metaphor, and argued that metaphorical creativity involves “a process of recontextualization and change with small variations as a strategy of meaning adaptation across modes and across time”.

3. The migrant crisis in Europe: Some facts

According to the United Nations High Commissioner for Refugees, between January 2015 and March 2016 over one million refugees and migrants arrived in Europe across the Mediterranean Sea. Asylum seekers and migrants came mostly from Syria (46.7%), Afghanistan (20.9%) and Iraq (9.4%). Figures by Eurostat point to over 1.2 million asylum applications received by EU member states in 2015, which doubled the numbers of the previous year. The countries with the highest number of first time applicants were Germany (35% of all applicants in EU states), Hungary (14%), Sweden (12%), Austria (7%), Italy (7%) and France (6%).

April 2015 marked record levels in the number of deaths at sea; the death toll was estimated at more than 1,200 people when five vessels sank off the Libyan coast in the Mediterranean Sea. As a result the European Union launched a military operation known as European Union Naval Force Mediterranean (EUNAVFOR Med), Operation Sophia, which increased border patrol operations in the Mediterranean, in an attempt to fight migrant smuggling. One of the preferred routes from the Middle East was the water crossing to the Greek islands (Chios, Kos, Lesbos, and other islands).

The UN refugee agency UNHCR reported on the lack of adequate facilities for the refugees on the Greek islands and appealed to other EU states to take appropriate measures. In order to ease the burden on Greece and other countries on the outer borders of the EU, a new quota system was proposed to relocate and resettle asylum seekers. The EU also negotiated a treaty with Turkey, effective from 20 March 2016, to accept migrants deported from the Greek islands under a fast-tracked process. In France the appalling security and humanitarian conditions of the refugee camp in Calais, dubbed ‘the jungle’, was a bone of contention between France and Britain for quite some time until it was dismantled in October 2016.

4. Methodology

4.1 Case studies: Data sources and data collection

Political cartoons generally consist of single-panel, or multiple-panel, cartoons with captions and sometimes speech balloons, which are usually placed on the editorial page of newspapers and news websites, and are associated to editorials in order to co-construct and express editorial opinion and political commentary on social actors or relevant current events.

In our selection of political cartoons on the topic of the migrant crisis in Europe during the years 2015–2016, we made a distinction between two sources corresponding to the established aims:

- a. Amateur/professional cartoonist from different European countries and the USA: A sample of 160 cartoons was randomly selected from the following websites:
 - <http://www.cartoonmovement.com/>
 - <http://www.politicalcartoons.com/>
 - <http://www.cartoonstock.com/>
 - <https://www.creators.com/categories/cartoons>
- b. Professional cartoonists in quality newspapers: A selection of 45 cartoons in English, and 35 in Spanish was made from four quality newspapers differing in ideological orientation. *The Guardian* identifies with center-left liberalism, and the readership of *El País* has traditionally been on the mainstream left of Spanish political opinion. Both *The Daily Telegraph* and *El Mundo* have a more center-right political orientation.

For this paper the following two cartoonists have been selected for the analysis:

- Steve Bell (*The Guardian*): Steve Bell is an award-winning cartoonist, and holds Honorary degrees from the Universities of Teesside, Sussex, Loughborough, Leeds and Brighton. His cartoons often cause controversy with their characteristic images featuring grotesque characters.
- <https://www.theguardian.com/profile/stevebell>
- Christian Adams (*The Daily Telegraph*): Christian Adams was a regular political cartoonist in *The Daily Telegraph* since 2005. He has recently rejoined the *Evening Standard* as its political cartoonist. Adams was voted Political Cartoonist of the Year for 2012 by the Political Cartoon Society.
- <https://www.telegraph.co.uk/comment/cartoon/archive/adams/>

4.2 Hypotheses and research objectives

The case study posits the following hypotheses:

- H1: The non-linguistic nature of cognitive mechanisms such as metaphor, blending strategies, and cultural models will be confirmed by the presence of common instantiations of these mechanisms both in language and in editorial cartoons (cf. Bergen, 2004).
- H2: Creativity as recontextualization will be present in more elaborate forms in the expression of political commentary by professional cartoonists.
- H3: Critique in cartoons will be targeted at highlighting the inconsistencies between purported immigration policies in EU discourse and the social reality of the conditions of migrants in Europe.

In order to test the hypotheses, the following research objectives are defined:

- i. Identification and analysis of the use of common metaphors, blending strategies, and cultural models, in the language of politicians and in the press, and in the political cartoons.
- ii. Identification and analysis of cognitive mechanisms and of forms of creativity as recontextualization in the political cartoons.
- iii. Analysis, interpretation and deconstruction of the cartoons following the procedure developed in Marín-Arrese (2005, 2008, 2015).

4.3 Research design: Procedure

Political or editorial cartoons are a multimodal mode of communication, where meaning is typically constructed via two semiotic modes, the verbal and the visual. In the process of interpretation and deconstruction of cartoon discourse, the following processes and stages are taken into account (cf. Marín-Arrese, 2005, 2008, 2015):

- i. *Set-up Phase*: The cartoon genre involves an intentionally created frame which prepares the interpreter to accept any situation as a possible ‘world’, and invites him/her to adopt a ‘willing suspension of disbelief’ (cf. Samuel Taylor Coleridge, 1817).
- ii. *Visual perception*: The reader has an initial simultaneous access to all the components of the stimuli (visual representation, caption, speech balloons, etc.) in the cartoon, which contains both the incongruity and the appropriate cues to resolve it.

- iii. *Contextual, cultural and socio-political knowledge*: The reader draws on sources of knowledge as a guide to the recognition and interpretation of scenarios, entities and the metaphorical conceptualization.
- iv. *Salient scenario*: The reader constructs the most relevant interpretation of the visual representation on the basis of some salient meaning or salient familiar scenario, recognizing the individuals and situations depicted and the expectations which are congruous and compatible with this scenario.
- v. *Incongruity*: The reader typically encounters some form of visually depicted incongruity involving some discrepancy or incoherence regarding expected scenarios, rational behavior, etc., or juxtaposed discordant scenarios. The incongruity detected within the initial salient scenario, the clash or divergence from expectations, triggers a reinterpretation process and the search for a cue to access an alternative interpretative scenario.
- vi. *Cue*: A relevant cue, verbal or visual, prompts access to an alternative, non-salient, novel meaning or scenario. In pictorial cartoons, we typically find a visual interpretative cue which induces access to an alternative scenario representing the target. In multimodal cartoons, the interpretative cue is characteristically found in the verbal prompt, or in the multimodal interaction between some visual interpretative cue and the verbal elements.
- vii. *Reinterpretation or 'Revisitation'*: The incongruity triggers the search for an alternative interpretation and enforces a reversal or shift whereby the salience imbalance is reassessed and the non-salient novel interpretation or scenario is now reconsidered.
- viii. *Resolution*: The resolution phase, where the salient meaning is discarded, though not necessarily suppressed or cancelled in the case of cartoons, and the non-salient interpretative scenario is adopted.
- ix. *Critique*: An essential ingredient is the intentionality or the 'raison d'être' of the cartoon, the intended critique and the persuasive effect.
- x. *Emotional effects*: Cartoons involve some form of emotional involvement on the part of the reader, a sense of complicity and shared intentions with the cartoon producer, derived from the interpretation process. This emotional power of the cartoon combines with the intended critique to yield a highly complex message, which may be used effectively in either reinforcing or challenging social, cultural, and political practices (cf. Ginman & von Ungern-Sterberg, 2003).

5. Results and discussion

5.1 Metaphor in cartoons and in the language of politics and the media

This section is dedicated to the analysis of the use of common metaphors, blending strategies, and cultural models, in the language of politicians and the press, and in the political cartoons.

In the sample of cartoons by amateur/professional cartoonists from different European countries, and from the USA, we find a discursive construction and qualification of social actors and events, involving stereotypical representations and evaluative attributions of negative traits, whereby migrants are objectified, dehumanized and conceptualized as a natural disaster or a social threat. Politicians, on the other hand, are often depicted as animals and symbolic representations. The EU is portrayed variously as a lady sleeping, oblivious to the refugee crisis, or as a woman in the posture of an ostrich, hiding her head, and the European citizens mostly as tourists on the beach.

Table 1 presents a summary of the main forms of representation found for the social actors and events, and for the choice of source domain and the modes chosen, as well as the relation to common metaphors found in the language of the media and politics, and in cultural sources.

Table 1. Representations in political cartoon discourse

Social actors, phenomena, actions, etc.	Source	Modes	Language of politics, media & culture
Refugees	Swarm (of insects)	Verbal	“a swarm of people...”
Refugees	Tidal wave	Visual + Verbal	“this tidal wave of migrants”
Death	The grim reaper	Visual	culture
Death	The grim ferryman	Visual	culture
Sea	Scythe of death	Visual	culture
Sea	Cemetery	Visual	cartoons
Boat	Coffin/body bag	Visual + Verbal	cartoons
European citizens	Tourists	Visual	cartoons
Europe	Nymph europa	Visual	culture

In political discourse and in the press, we find a series of references to migrants as ‘swarms’, as a flow or tidal wave, as desperate individuals ‘marauding’ the area of Calais. Metaphors instantiating these structures of social beliefs are also present in cartoons: MIGRATION IS A SWARM (OF INSECTS); MIGRATION IS A TIDAL WAVE.

- (1) David Cameron has vowed to throw more illegal migrants out of Britain as a deterrent, blaming the Calais crisis on “a *swarm* of people” trying to escape north Africa in an attempt to come to the UK.
(*The Guardian*, *Cameron pledges to deport more people to end ‘swarm’ of migrants*, 30 July 2015)
- (2) UKIP MEP Mike Hookem: “... the *flow* of migrants trying to get into Britain illegally ...”.
(*Daily Express*, 13 Oct 2015)
- (3) “Forget the Greek crisis or Britain’s referendum, this *tidal wave* of migrants could be the biggest threat to Europe since the war”.
(Headline, *Daily Mail*, 27 June 2015)
- (4) “The increasing *ebb and flow* of people across our planet is one of the greatest issues of our time. ... This unprecedented *influx* has had significant consequences on our economy, our public services, our culture and our environment”.
(UKIP manifesto 2015)
- (5) Philip Hammond, UK foreign secretary: “So long as there are large numbers of pretty desperate migrants *marauding* around the area, there always will be a threat to the tunnel security...”.
(BBC news, 9 August 2015)

As van Dijk (1998, p. 291) has observed with respect to the expression of social beliefs and the use of argumentative comparisons between US and THEM, “The core concepts organizing these beliefs are *difference*, *deviation* and *threat*, applied in all social domains”. In his study of the discourse of racism, and the representation of immigration and immigrants, Van Dijk (1987, p. 372) notes how metaphors may be used to implicitly highlight certain features of the out-group, such as the ‘flood’ metaphors whereby immigrants are dehumanized and “immigration is categorized as a natural disaster”, conceptualized as tidal waves that present a “threat to the country and its population”.

The first cartoon analysed in this section depicts two European citizens as tourists sunbathing on the beach, who are suddenly the victims of a tidal wave: REFUGEES ARE A TIDAL WAVE (© Gary Varvel, 2015 Indystar Creators.com), (<http://www.cartoonistgroup.com/store/add.php?iid=132765>; Last accessed 03/02/2020). The image of the wave is a visual integration or ‘fusion’ of the source domain, a tidal wave, with the target domain, thousands of refugees, who are depicted as a conglomerate or mass of undifferentiated faces, with the words “Refugees”.

Metaphors like these are readily combined with the negative connotations of ‘huge’ numbers of immigrants and the metaphor of ‘*invasion*’, which “implies massive attack by a foreign enemy, and further supports the negative properties of the immigrants as perceived and presented by the responsible elites” (Van Dijk, 1987, p. 373). The conceptualization of immigrants as a swarm, as a plague of insects

that destroys crops and spoils property links with the parasite scenario commonly associated with immigrants, the “IMMIGRANT-AS-SCROUNGER who *sucks, drains or bleeds the country dry, aims for freebies and lives off or sponges from Britain*, thus exploiting it as a *treasure island*” (Musolff, 2015, p. 46).

The presence of these dehumanizing and stigmatizing metaphors in the discourse on immigration is recurrent in political discourse and in the discourse of the press, in blogs and in online fora, as has been observed in the critical discourse literature (Chilton, 2005; Hart, 2010; KhosraviNik, 2010; Musolff, 2012b). These forms of representation are effective strategies of cognitive and emotional coercion, by creatively generating negative beliefs about specific social groups based on pre-existing cognitive frames, and by triggering emotional responses, such as the inducement of fear through the representation of potentially threatening events and the actors involved in them, which evoke danger, evil, troubles, and so on, all derived from immigration. In the midst of all these discourses on immigration, one should be reminded of the death of Aylan Kurdi, 3 years old, drowned on 2 September 2015, and found on the beach in Bodrum, Turkey.

Common representations traditional in Western culture include the conceptualization of death in terms of Personification: DEATH IS THE GRIM REAPER, DEATH IS THE GRIM FERRYMAN. In the cartoon with the representation of THE GRIM REAPER & THE SCYTHE OF DEATH (©Maarten Wolterink, Cartoon Movement), (<https://www.cartoonmovement.com/cartoon/12131>; Last accessed: 03/02/2020), we find these metaphors together with the visual integration SEA/BOAT IS SCYTHE OF DEATH.

The cartoon depicts a storm at sea with a group of refugees desperately rowing a boat, which is a fusion or visual blend of a boat and of the scythe of death, in the hands of The Grim Reaper. In the background we have a glimpse of The Grim Reaper on land, also at work in the places where the refugees are fleeing from. And opposite to that we have the only firm and secure piece of land representing the European Union with a billboard with the word NO on it, which sends a clear message for any would-be immigrants. The Mediterranean voyage provides the setting for a considerable number of cartoons, with some more idiosyncratic metaphors, such as this example. The caption ‘Body bag boat’ invites the metaphor BOAT IS COFFIN.

5.2 Creativity in cartoons

Creativity as recontextualization is more patently present in the work of professional cartoonists in quality newspapers. The first of these cartoons draws on the following ‘contextual information’, published in *The Guardian*, reporting on

desperate scenes along the EU borders, as that of refugees breaking down a gate on the Greek-Macedonia border:

- (6) “Aid agencies and NGOs have said Europe’s ‘unconscionable’ response to the refugee crisis is courting humanitarian disaster, as Brussels scrambled to prepare emergency summits and desperate scenes unfolded across the continent, from Greece’s border with Macedonia to a makeshift camp outside Calais”.
(*The Guardian*, 1 March 2016)
- (7) “Trump wants the US to build a wall to keep out Latin Americans. Macedonia already has this barbed wire fence to keep Syrians and others from entering via Greece – itself the tragic exception to Europe’s desirability, yet also the geographic point of entry across the Aegean”.
(Jonathan Jones, *The Guardian*, 2 March 2017)

The cartoon by Steven Bell on the refugee crisis in Europe (2 March 2016, *The Guardian*), (http://www.belltoons.co.uk/bellworks/index.php/leaders/2016/3953-020316_WILKOMMEN; Last accessed 03/02/2020), depicts a border scene. In the foreground there is a group of uniformed members of the police/army (some in dark blue and black, a few in dark green) wearing helmets or army caps and gas masks, carrying ‘riot batons’, and deployed in military formation, and a barbed-wire fence. In the background, behind the fence, a lady (Angela Merkel), with a pony tail, wearing a yellow garment with a low neckline, accentuating and displaying her breasts, is carrying two flags. She is raising the European flag in her right hand with the words “Willkommen”, and carrying the German flag in her left hand.

In the first salient scenario, we find a representation of German and Macedonian soldiers as a repressive force, ready to attack some (invisible) enemy. Visually there is a salience of specific features such as: helmets, goggles, gas masks, ‘riot batons’, barbed-wire fence. The incongruous element, the visual representation of Angela Merkel as La Marianne, a national symbol of the French Republic, triggers the re-interpretation process and the search for cues to access an alternative non-salient scenario. The cartoon makes use of multimodal cueing: the caption, with the words “After Delacroix”, verbally cues the painting by Eugène Delacroix, *Liberty Leading the People* (1830), which depicts the July Revolution of 1830, which toppled King Charles X. The perceptual resemblance to the scene depicted in Delacroix’s painting is a salient visual cue providing access to the French Revolution scenario.

In the alternative scenario, Angela Merkel is metaphorically represented as La Marianne, a portrayal of the Goddess of Liberty and an allegory of liberty and reason. La Marianne evokes the revolutionary ideals vindicated by the French Revolution: ‘Liberty, Equality and Fraternity’. There is a visual resemblance of

Merkel's hairstyle to the Phrygian cap worn by La Marianne, originally worn by freed slaves during the Roman era and which became a symbol of freedom or liberty during the French Revolution. The caricature of Merkel also seems to be a fusion of La Marianne, leading the fight for the glory of France, and the nymph Europa, cued by the European flag, as the personification and symbol of Europe. There is a clear resemblance in Merkel's dress with a low neckline to the nymph in the painting of Europa and the bull, which is depicted as the personification of the European continent in *Nova et accurata totius Europæ descriptio* by Fredericus de Wit (1700).

There are unexpected deviations from the schema and visual representation of the Revolution scenario. In the scene of the French Revolution, La Marianne is leading the people and surrounded by her followers; in the cartoon, Merkel is on her own, and protected, or perhaps, refrained by soldiers behind the barbed-wire fence. An emergent element in the blend is the German flag in Merkel's left hand, the source of her strength, instead of the musket that La Marianne carries.

By way of critique we may conclude that there is an apparent paradox by visually integrating the repression event (scenario 1), with the goddess of Liberty leading the revolt in defense of the democratic ideals of the EU (scenario 2). This portrayal of Europe leads us to unravel the political message: Europe is at the same time (a) purportedly upholding the ideals of democracy and solidarity, and finding strength and support in Germany; and (b) strongly defensive and setting barriers against the reception of asylum seekers. We may thus infer the critical stance of the cartoonist, suggesting that what is at stake is the legitimacy of the purported ideals of the European Union. Humor is here used as a form of subversion against the dominant ideology of the political elite in most European countries and their border policies.

For the cartoon by Christian Adams, published in *The Daily Telegraph*, we draw on the following contextual information: the relevant event is the 34th annual Franco-British security summit dominated by the issue of the migrants in Calais and of a possible British exit from the European Union. The following are items of news published in several media.

- (8) "A senior French minister (finance minister) triggered a furious political row today by saying *the Calais migrant camp will come to Kent* if Britain votes to leave the European Union". (ITV news, 3 March 2016)
- (9) "French President appeared to echo suggestions migrants would be free to cross the Channel into the UK rather than being stopped on French soil after an Out vote in the referendum". (*Daily Telegraph*, 3 March 2016)

- (10) Eurosceptics accused the British government of organizing “fake threats” from allies. Number 10 was forced to deny it was behind a surprise change in tone from the French government ... (*Daily Telegraph*, 3 March 2016)

The Cock and Bull cartoon by Adams (4 March 2016, *The Daily Telegraph*), (<http://adamscartoons.newsprints.co.uk/view/32494185/cock>; Last accessed 03/02/2020), depicts the caricatures of François Hollande and David Cameron. Hollande appears as the ‘Gallic rooster’, the symbol of France, with the colors of his crest, nose/beak and plumage evoking the French tricolor. David Cameron is caricatured as the British bulldog, popularly used to represent the United Kingdom. The designation ‘bull’ was applied to this breed of dogs because of the dog’s use in the sport of bull baiting. Hollande is fuming and fretting and beating his wings, and Cameron is red in the face, all puffed up and walking determinedly. Both are repeating the words “Calais will come to Kent!”, echoing the words of the French finance minister.

It would appear that France and the UK share strategies with regard to asylum seekers in Calais, and Hollande and Cameron have purportedly come to an agreement to echo the threat that if Britain votes to leave the European Union then the migrants at the Calais camp would be free to cross to the UK. Cameron is presumably determined to go ahead with the Referendum, but is sweating it out due to accusations of ‘fake’ threats from Eurosceptics. The UK government has been accused of scaremongering on issues of security measures in the border. The allusion to the falsity of these threats is found in the caption of the cartoon, ‘cock and bulldog’, which is a deviation from the phrase ‘a cock and bull story’ to refer to exaggerated and fanciful stories. The message of the cartoon is transparent: The warning regarding the consequences of Brexit may be interpreted as a deceptive strategy shared by both Hollande and Cameron.

These cartoons by professional cartoonists are clear exemplars of creativity in the use of cognitive mechanisms in cartoons in the expression of political commentary. In their work we find more idiosyncratic metaphors, whose interpretation is “far less governed by entrenched, pre-existing correspondences between the schematic structures in target and source” (Forceville, 2009, p. 27). Creativity and idiosyncrasy is also patent in the use of caricature and the metaphorical and symbolic representations of leading politicians.

6. Conclusions

This paper has explored the discursive construction and qualification of social actors and events in the discourse on the present migrant crisis in Europe, in relation

to the set of social beliefs recurrent in the discourse of politics and the press. The paper brings together the analysis of representation and (de-)legitimization strategies from a CDA perspective (Wodak & Meyer, 2015), with that of cognitive mechanisms in cartoons, metaphors, blending strategies, and their interaction with cultural models, from Cognitive Linguistics studies (Brône & Feyaerts, 2003; Bergen, 2004; Marín-Arrese, 2005, 2008).

Regarding representation, in the sample of cartoons by amateur/professional cartoonists, we find that migrants are dehumanized and stigmatized, categorized as a mass or a collectivity, and endowed with stereotypical, negative traits, and posing a clear threat to the EU. There is a common strategy of the invisibility of migrants as persons, much less as individuals (with the exception of some cartoons on the death by drowning of the three-year old Aylan Kurdi, on 2 September 2015 in Bodrum, Turkey). The EU is represented as ineffectual, impaired for action, and oblivious to the situation of refugees. A frequent topic is the representation of the Mediterranean as a mass grave. In the sample of cartoons from the web pages, there is a relative uniformity in that we find similar and more conventional metaphors and other cognitive mechanisms. In most cases, in the cartoons we find metaphors which are common in the language of politics and of the media. Creativity in combinations of metaphor and metonymy, blends and cultural models is most obvious in the work of professional cartoonists in quality newspapers. The cartoon by Bell most clearly exemplifies creativity as recontextualization in the unexpected twist in the familiar Revolution scenario and the cultural model of La Marianne, and in the discordant elements of the emergent structure in the blend. The cartoon by Adams likewise incorporates a twist in the novel use of the phrase ‘cock and bull story’.

A final word is due regarding the critical stance of these cartoons, and their ideological import and persuasive power in denouncing the tragic events in the migrant crisis, and providing counter-narratives which challenge mainstream discourse. By creating a site of transgression, where pathos collapses into bathos, cartoons effectively play on our emotions and challenge social conventionality and normativity, while urging us to actively participate in the unraveling of the intended message.

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Disentangling metaphoric communication

The origin, evolution and extinction of metaphors

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This work addresses the different processes involved in the genesis and evolution of metaphors. Studying mainly cartoons published after dramatic events, I show how, when facing a communication need due to a situation of media stress, metaphors are generated to promote news dissemination and comprehension. I propose that an efficient metaphor quickly transforms into a meme that effectively colonizes the communication ecosystem, thanks to the Internet and social networks platforms. In addition, I explain how metaphors can collaborate and evolve together, in a process I name *metaphor symbiogenesis*. The way these metaphors approach particularly complex and delicate issues has great communicative potential and can become an independent process in metaphor evolution.

Keywords: metaphor evolution, conceptual metaphor theory, metaphorgensis, meme, cartoons

Introduction

The use of metaphors is a distinctive element in human communication (Donald, 1991; Johansson, 2005). Our species is especially adept at metaphorical construction, which has undoubtedly allowed us to conquer cognitive abilities and use them to develop abstract thinking (Pinker, 2010). As Kenneth Burke wrote (1945), “a metaphor is a device for seeing something in terms of something else”, so an assimilation (which requires abstraction) is necessary. They possibly originated in an adaptive character and were later subjected to selection (Forceville et al., 2006), in such a way that using them represented an advantage. An efficient metaphor invigorates communication. It is a sort of communicative package that accelerates the process of information transfer (Draaisma, 2000, p. 17). Once this process is discovered, using it becomes very useful, not only due to this celerity, but also

because of its ability to capture the attention of the interlocutor with ingenious metaphors. The metaphorical process contains an element of linguistic creativity that makes it very attractive and suitable for communication (Kövecses, 2005).

Visual metaphors lie within this complex communicative process. Many of them are, at the same time, metonymies or symbols, and can warn, summarize, or project an image far from its strictly semantic content (Deacon, 1997, 2012). As Terrence Deacon (2012, p. 32) pointed out, “symbols have literally changed the kind of biological organism we are”. In this sense, the fact that only human language systematically employs symbols rather than signals (Sinha, 2014) is quite telling, as is the fact that symbolic thinking is relatively recent, around 100,000 years old (Tattersall, 2008; Bolhuis et al., 2014). Thus, non-verbal communication must have been a reality among primitive tribal groups (Seitz, 2005), and the access to these visual metaphors would also be useful and communicatively efficient (Logan, 2007). Therefore, presenting something in terms of another thing and being understood while doing so is a major breakthrough which captures the attention of the interlocutors and helps them retain information. If the possibility of verbal communication that improved non-verbal and body communication was highly adaptive (Tomasello, 2008), being able to expand our communicative spectrum with metaphorical language must have been a new and powerful adaptive element.

In several previous works, I have studied metaphor genesis from an evolutionary perspective (Domínguez et al., 2014a; Domínguez, 2015a, b, c; Domínguez, 2016), suggesting different eco-evolutionary processes and dynamics. Here, I delve into all these concepts jointly, providing more relevant examples to reinforce the ideas those papers defended. Likewise, this paper also establishes that metaphors can collaborate and evolve together, in a process I call metaphorical symbiogenesis: when two metaphors turn out to be more communicatively efficient when they complement each other, they become a single communicative entity.

For the study of these concepts, I have mainly used cartoons regarding several news events that shocked public opinion published in various media outlets. Cartoons are a very useful tool for the analysis of social realities, due to the combination of images and short and dogmatic sentences, which often express the feelings of the public (Hempelmann & Samson, 2008). Therefore, they disseminate new metaphors (El Refaie, 2003; Bounegru & Forceville, 2011) and concepts (Domínguez & Mateu, 2013; Domínguez et al., 2014a) very effectively. Many of these cartoons are editorial cartoons, so they reflect the editorial line of their newspaper and an intention to persuade and guide the readers.

Metaphorgenesis: On the origin of metaphors

The term metaphor comes from the Greek words *meta* (outside) and *pherein* (move). Thence, the term designates the cognitive action of moving one concept to another, of seeing A in terms of B to facilitate communication and the connection of different ideas and concepts. Gibbs and Cameron (2008) indicate that people use metaphors for different cognitive, linguistic, social, and cultural reasons. But communicative efficiency always lies behind all these motives: that is, the use of the metaphorical resource is effective compared to other communicative strategies.

Raymond Gibbs (2008, 2011) considers the use of metaphors a fundamental diagram from which people can conceptualize the world. Lakoff and Johnson, in *Philosophy in the Flesh* (1999, p. 4), show that a major finding of cognitive science is the fact that our mind is inherently embodied: our conceptual system is (as claimed by many cognitive linguists) mirrored in language patterns, like the systematic use of metaphors. This use of metaphors may facilitate some forms of internal embodied simulation of experiences on the part of listeners/readers (Gibbs, 2006; Ritchie, 2008), which may also provide the basis for a very empathic response, as shown by Elena Semino with pain experiences (Semino, 2010).

Therefore, embodiment might explain why the use of metaphors is common in humans (Seitz, 2005) and every culture has its own metaphor set, just as each language grasps the world around it in a different way. The metaphor set of each culture (Kövecses, 2005) might also have had selective value in the past, in the sense that it tightened and strengthened relationships within the groups who share them (Quinn, 1991). As George Lakoff (1993, p. 210) wrote, “a metaphor [is] not a figure of speech, but a mode of thought”, so this thought process must be learned, even if there is a natural predisposition to it, due to embodiment.

In this way, metaphors can be useful to accelerate communication, but also to avoid taboo or problematic terms, or expressions that the speaker prefers to conceal so as not arouse adverse or contrary feelings (Cameron, 2007; Ritchie, 2008). They are widely used to deal with disease, to refer to delicate issues (Domínguez & Sapiña, 2016; Jasen, 2009; Lanjareira, 2013) or to discuss political matters (Musolf, 2004). So they are a linguistically adaptive element with selection value: i.e., the populations with the highest metaphorical potential were more communicatively efficient and evolutionarily successful.

The outline of the process of metaphorical genesis is as follows. When an event shocks public opinion, people feel the need to express their opinion and feelings, and resort to metaphorical production. I call this phenomenon *metaphorgenesis*. New metaphors are disseminated through conversation and are soon subjected to strong selection pressure, survived only by the fittest and most powerful metaphors in terms of communication. This communicative potential may be due

to the simplicity of the idea or the creativity or ingenuity of the creator. A good metaphor depends on many linguistic, socio-cultural, political, or even ethnical factors, as established by Forceville et al. (2006), “the aesthetic attractiveness of metaphors increases with the degree to which they obey the principle of minimum means for maximum effect”.

Let us offer a couple of illustrative examples. After the attack to the satirical publication *Charlie Hebdo*, social networks experienced a true metaphor explosion, with all sorts of references to the artists’ work and tools of the trade. However, the pencil soon succeeded as a symbol of the profession and as a metaphor for freedom of speech, over elements such as quills, brushes, erasers or the magazine itself (Domínguez, 2015c). The pencil was a simple metaphorical element, but its success was immediate: it was a humble tool, within anyone’s reach, and embodied the cultivation of reason, and thereby the most elemental values of democratic societies. The metaphor “Pencil is a weapon” was tremendously successful and spread throughout the communicative ecosystem until it became a symbol for freedom of speech (Figure 1a).

Another example might better illustrate this process. After a Germanwings aircraft crashed on 24 March 2015 and killed 144 passengers, the usual mourning metaphors appeared immediately: the plane was compared to a bird flying towards the sky, the passengers, to angels, and all the usual metaphorical images of this type of tragedies were also present. Nevertheless, when it was announced that the accident was due to the pilot’s suicide, an extraordinary need to communicate suddenly aroused, leading to a true metaphoric genesis. The pilot was compared to a terrorist, the need to increase psychological tests done to crew members was discussed, and the plane was depicted as a coffin or an incarnation of the devil. But one metaphor prevailed among all the rest, despite its complexity and risk: the pilot was assimilated to a political leader and the passengers to a captive population. This paved the way for other metaphors which suggested that political figures were leading their countries to disaster, just as the Germanwings pilot doomed his passengers. The metaphor “A bad politician is a doomed pilot”, originated in Italy referring to Matteo Renzi, quickly spread around the world (Domínguez, 2016), and other similar cartoons appeared, with leaders such as Barack Obama, François Hollande, Manuel Valls, Marine Le Pen, Juan Manuel Santos, etc. (Figure 1b).

These two examples illustrate how metaphors emerge. After metaphorgensis, what I called *metaphoric founder effect* occurs: a successful and communicatively efficient metaphor quickly spreads throughout the communication ecosystem. This process usually follows well defined and marked guidelines. In some cases, they can even be predictable. For instance, after the terrorist attack at Brussels airport on 22 March 2016, which left 35 dead and many wounded, as well as devastating psychological effects on the population, there was a strong communicative

need, an urgent wish to express their state of mind: anger, anxiety, sadness, despair, mourning, incomprehension and weariness. Again, many metaphors appeared trying to synthesize some of these concepts. However, two very powerful metaphors emerged and competed against each other: the use of fries (*frites*) as a Belgian symbol (a case of personification and metonymy) and of the Manneken Pis fountain as a symbol for Brussels, defying the terrorist (Figure 1c). Finally, this last metaphor prevailed, and the fountain soon became the best distinctive element for Belgian resistance, representing the fight of a nation against terrorism. This is the same role fulfilled by the Statue of Liberty (in New York) or the Eiffel Tower (in Paris) in previous attacks, or by the Columbus Monument, in the recent terrorist attack in La Rambla, Barcelona (Figure 1d).

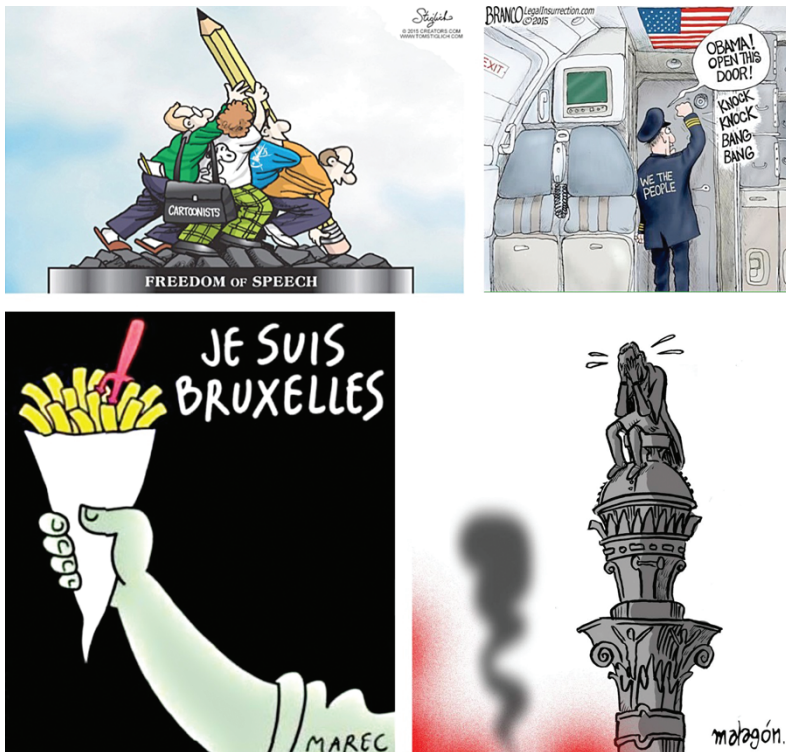


Figure 1. Metaphorgensis. Examples of metaphorical genesis: (a) Tom Stiglich, “Freedom of speech”; (b) Antonio Branco, “Obama! Open this door!”; (c) Marec, “Je suis Bruxelles”; (d) Malagón, “Barcelona”

Metaphors as memes and the eco-evolutive process

The concept of meme as a powerful cultural unit was created by Richard Dawkins. In Dawkins's words; "examples of memes are tunes, ideas, catch-phrases, clothes fashions, ways of making pots or of building arches. Just as genes propagate themselves in the gene pool by leaping from body to body via sperm or eggs, so memes propagate themselves in the meme pool by leaping from brain to brain" (1976: p. 192). The first authors to consider metaphors as memes were Paul Chilton (2005) and Andreas Musolff (2008); in particular, Musolff studied how Nazism used many metaphors against Jewish people (comparing them to rats and vermin) and how these became extraordinarily successful memes in a society that was already looking for someone to blame for its economic and social problems.

In any case, a successful metaphor that quickly spreads throughout the communicative ecosystem is a meme, a cultural unit that propagates "leaping from body to body". Thanks to the Internet and social networks platforms, the colonization speed of the communicative ecosystem is currently very high. Estimates show that Internet users have grown by 82% (almost 1.7 billion people) since January 2012, meaning there were almost one million new users each day, more than ten per second. The increase in mobile phone use (with Internet access) and in the exchange of news (via email or WhatsApp) has also increased monumentally in recent years: mobile connections grew by a shocking 2.2 billion, which amounts to an average of 14 new subscriptions every second.¹

Weng et al. (2012, 2013) have studied this process: how memes are subjected to an intense competition, selection and adaptation process over the Internet, and how they spread virtually as an infectious process. Musolff (2010) also suggests an analogy between the expansion of a meme and an infectious process, how a clever idea can quickly colonize a communication space. In this sense, Daniel Dennett (1995, p. 347) suggests that "memes now spread around the world at the speed of light, and replicate at rates that make even fruit flies and yeast cells look glacial in comparison. They leap promiscuously from vehicle to vehicle, and from medium to medium, and are proving to be virtually unquarantinable". This entire process involves an important creative component, and some witty metaphors spread over the networks in a few minutes, becoming a very impactful and efficient meme.

Thus, after unexpected news with no significant precedent, a new communication niche originates and is soon colonized by metaphors, and a competition phenomenon and a selection of the fittest metaphor or metaphors occurs.

1. Simon Kemp. *The incredible growth of the internet*. https://thenextweb.com/insider/2017/03/06/the-incredible-growth-of-the-internet-over-the-past-five-years-explained-in-detail/#.tnw_OgOXT8R2

This new communication space is included in a habitat with other pre-existing niches, with which it interacts and relates. For instance, when the fact that the Germanwings crash had occurred due to a deliberate act of sabotage (caused by the pilot's suicidal intent) became public, a new and unexpected communication niche originated, interacting with previous and consolidated niches such as terrorism, computer errors, low cost airlines or human errors (Domínguez, 2016). The suicide niche was constructed as news came in and in turn generated new metaphors, in a process ecologists call niche construction (Lewontin, 1982; Laland & Sterenly, 2006).

Hence, every process of metaphorical genesis entails an eco-evolutionary process. The most valid metaphor becomes a meme that colonizes the communicative niche, within a communication habitat with different niches. This possibility was already explored by Berger & Heath (2005), who suggest that ideas have a habitat, that is, "a set of environmental cues that encourages people to recall and transmit them". Therefore, an eco-evolutionary feedback occurs, where the metaphor evolution transforms and modulates the media niche. And thus, as news items emerge the niche receives the feedback, expanding and becoming more metaphorically complex and diverse.

Adaptation of metaphors and other evolutionary processes

As events take place and the communication niche is constructed and expanded, metaphors suffer a number of mutations or micromutations that make them more efficient for the new news and socio-cultural context. They are small changes for the metaphors to adapt to each context; for example, to the celebration of a significant event, a holiday or any special change in current information. All these little changes contribute to niche construction.

In these cases, there are often adaptations. In evolutionary biology, the concept is used to describe the changes experienced by living organisms when adapting to a change in their ecosystem (Barton et al., 2007; Futuyma, 2009). These changes can be of two basic types: behavioral (including changes in ethology and habits) or structural (including the creation and modification of new organs).

This type of adaptations can be observed in cartoons published during the Spanish economic crisis, between 2009 and 2013. They used scissors as a very powerful metaphor for economy and wage cuts ("Cutbacks are scissors"). The mere image of a pair of scissors in a demonstration referred to the new government provisions, which altered the welfare state and fundamental rights of the citizens. However, in order to explain everything that meant for a society and for the health of a democratic country, the use of scissors developed a very rich metaphorical

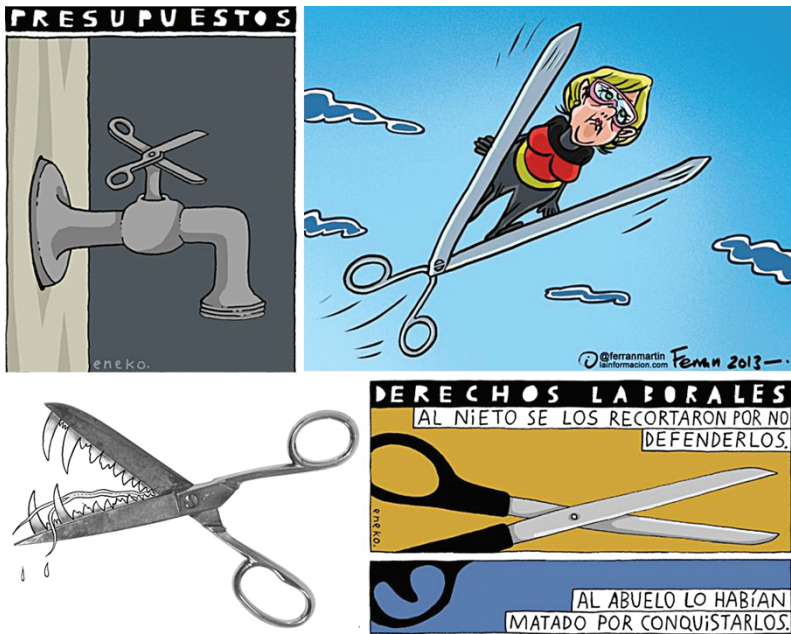


Figure 2. Behavioral adaptations. (a) “Budgets” by Eneko, (b) “Ski jumps” by Ferran (coinciding with the 2013 Winter Olympics). Structural adaptations. (c) Jap (d) “Labor rights” by Eneko

* (“The grandson suffered the cuts for not defending them”, “The grandfather was killed trying to conquer them”).

journey, with many structural and behavioral adaptations (Figure 2). In these cases, the use of multimodal metaphors was common. Their texts helped the reader to understand the picture better, and gave greater depth to the content.

There is a metaphoric evolution and an ontogenic process that turns a simple pair of scissors into a dangerous living being (Figure 3). In this way, behavioral adaptation often leads to structural adaptation.

Other more complex adaptive processes, such as coadaptation and exaptation, can also occur. The concept of co-adaptation is used in biology when separate structures or facets of behavior are designed (by natural selection) specifically to interact with each other. In Figure 4, we can observe a co-adaptation process



Figure 3. Evolutionary ontogeny of the metaphoric development of scissors as a symbol of economic crisis. (Author’s production from several cartoons in the sample)

between two metaphoric elements: budget cuts, represented by scissors, and police repression against demonstrations with people opposing such economic decisions, represented by the police truncheon. Two truncheons together and a pair of handcuffs become scissors: police repression elements co-adapt to the metaphor “Cutbacks are scissors”. The inclusion of the text “Cutbacks in indignation” contributes to the metaphoric purpose and facilitates communication. Moreover the extensive social use of the image of scissors as a metaphor for the economic crisis explains its communicative success, and allows the reader to immediately understand the message of the cartoon, leaving no place for confusion.

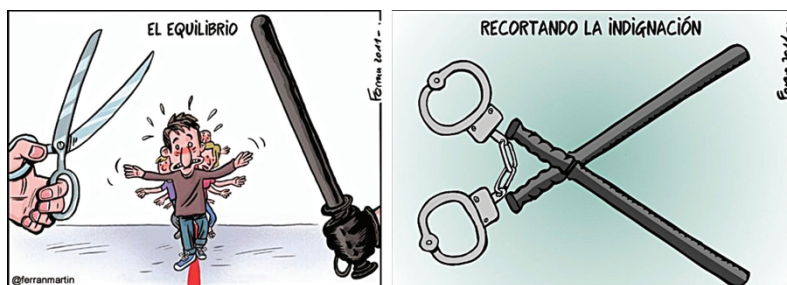


Figure 4. Co-adaptation. Police repression against demonstrators is symbolized by the truncheon and the handcuffs, which, together, co-adapt to the scissors metaphor. (a) “Balance” by Ferran; (b) “Cutbacks in indignation” by Ferran

Sometimes a metaphor unexpectedly takes a new sense. For example, after the sinking of the *Prestige* in front of the shores of Galicia in 2002, many metaphors channelled the discomfort with the environmental disaster and its poor management. In Figure 5, we see a case of what I call *metaphoric exaptation* (Domínguez, 2015a): the first panel shows a fish with the motto of the protests, *Nunca más* (never again), where the fish is a demonstrator and representative of the victims of the spillage; the second image shows a lighthouse illuminating the sea with black light (referring to the oil slick); finally, the third panel shows the skeleton of a fish turned into a lighthouse that illuminates the sea. This process is known in biology as exaptation: a trait was able to evolve because it served a particular function, but then it may end up serving another (Gould & Vrba, 1982). While natural selection directly drives an adaptation for its current use, in the case of an exaptation, the feature co-opted for a current use was originated for a different function, or for no function at all. A classic example is how feathers, initially evolved for heat regulation, were later co-opted for use in bird flight.

Exaptation has already been studied in linguistics as a very useful resource in the evolution of language (Lass, 1990), but metaphoric genesis had not been mentioned so far.

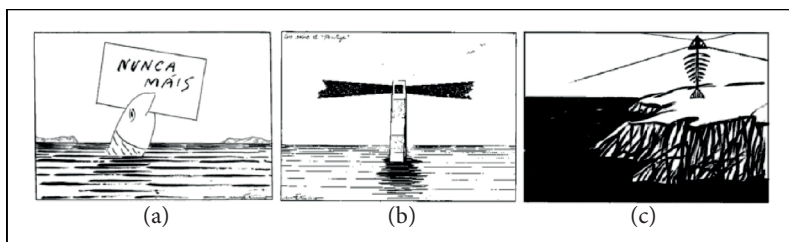


Figure 5. Exaptation. The metaphor of the fish as a protester exapted into a lighthouse (cartoons by Máximo (a, b) and El Roto (c))

Evolving together: Metaphoric symbiogenesis

Another step in this metaphor interaction occurs when two metaphors work together or feed each other back and one cannot be properly understood without the other. As we see, there is a strong cognitive dependence between both metaphors, but their merger makes them much fitter and more efficient in a particular communicative context.

For example, during the first years of the refugee crisis, many metaphors drew attention to the tragedies in the Mediterranean and the insensitivity of Western societies. The European flag was used as a symbol for the development of several ideas, especially using the symbolism of stars: twelve golden stars (perfection and unity) on a blue-sky background, forming a circle to represent the union of European nations. On previous occasions, the European flag had often been used to discuss the budget cuts of the economic crisis (with stars forming a pair of scissors: “European stars are scissors”), tensions within the EU (“European stars are angry”), or the dangers and obstacles of European management (“European stars are a banana peel”). These examples illustrate that the metaphor element “European stars are...” was always the basis for wordplay and metaphor evolution.

However, after the Lampedusa tragedy, where hundreds of migrants drowned, the blue background of the flag became metaphorical, referencing the sea. This included a double metaphorical intention: “The blue flag is the sea” and “Stars are dead migrants”. I have called this collaboration *metaphor symbiogenesis*.

We call symbiosis (from the Greek *syn*, ‘together’, and *biosis*, ‘to live’) the intimate and mutually beneficial association of organisms from different species (Margulis, 1992; Kutschera, 2009). Therefore, in a symbiotic association, both specimens benefit from the relationship, and their collaboration provides biological efficiency against other organisms without this type of association.

In this sense, after the Lampedusa tragedy, the stars of the European flag transformed into the bodies of migrants, floating in a circle over the blue background

of the sea. The Syrian refugee crisis produced this metaphorical framework again. The story of Aylan Kurdi, a boy who was washed ashore dead at a Turkey beach, led some cartoonists to draw him surrounded by a circle of starfish (Figure 6). From this moment on, the beach gains metaphorical content, with stars painted or sculpted on the sand and the blue sea as background.

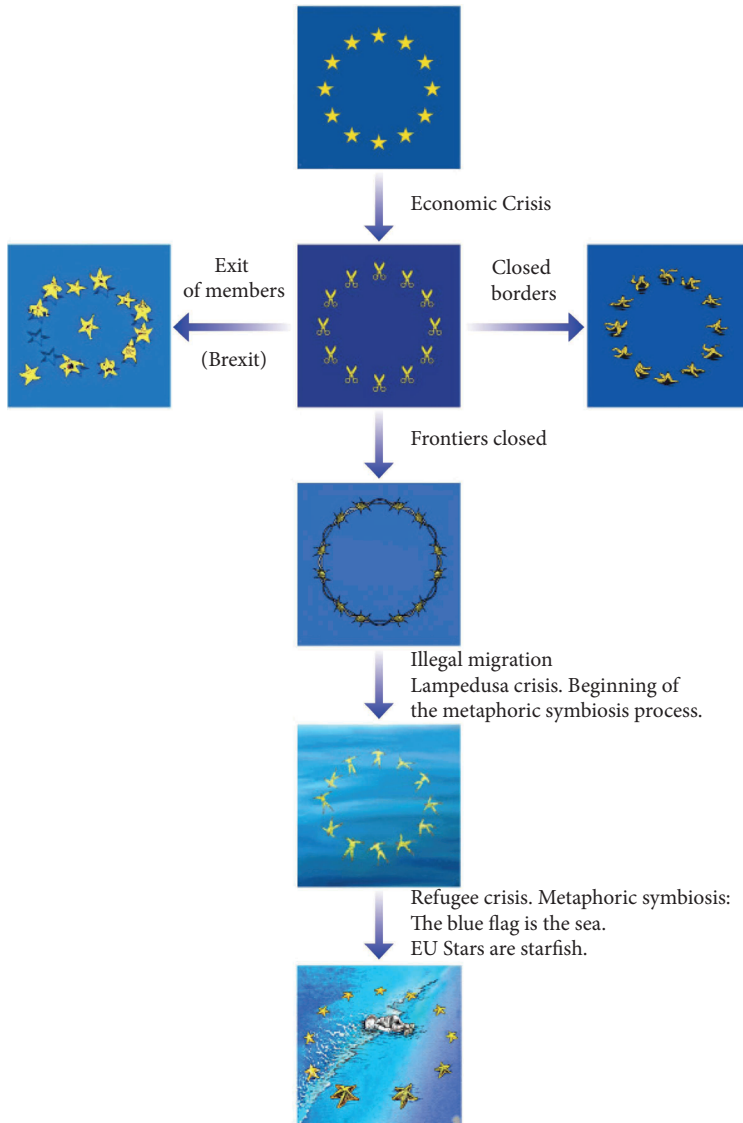


Figure 6. Metaphoric symbiosis. The process of metaphoric interaction and union originate more vigorous and effective cognitive content. (Author's production from several cartoons in the sample)

Had the European flag been a different color, this metaphor work would never have come that far. A metaphoric consolidation occurs, because the viewer connects the color blue with the sea and the sea with the tragedy of migrants and refugees and the European indifference and incompetence. In a case of metaphoric symbiosis, both metaphors work together, which allows them even to turn the stars of the union into starfish (Figure 6). Thus, the phenomenon of metaphoric symbiogenesis is characterized by a connection phase (the start of the symbiotic association between the two metaphors), a consolidation phase (when the resulting metaphor becomes efficient and communicatively successful), and possibly a subsequent phase of metaphoric replacement (when a symbiotic metaphor is replaced with another) (Figure 7).

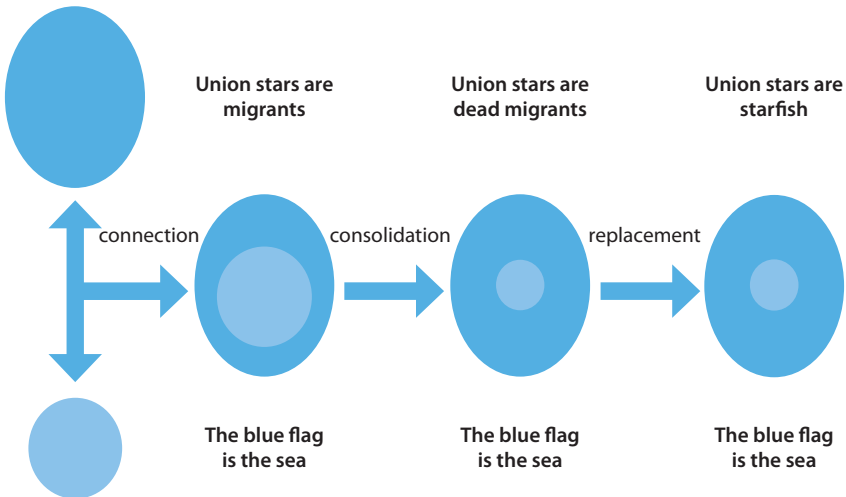


Figure 7. Metaphoric symbiogenesis model. The process goes through the phases of connection, consolidation and replacement

Extinction of metaphors: Living fossils and dead metaphors

When the news flow decreases and the communicative need is not as urgent, the metaphors originated lie dormant until another news item revives them. The communicative niche remains stable until it finally disappears over time. Some very successful metaphors (memes) can even become idiomatic expressions or sayings, and remain alive as an efficient epistemic construction when their communicative niche has already disappeared. In this sense, anonymity (the fact that most proverbs and sayings do not have a known author) provides greater credibility, turns them into unquestionable communicative truths, a sort of popular wisdom.

For example, the proverb “do not look a gift horse in the mouth” refers to checking a horse’s teeth before buying it in order to know more about its age and health situation. This was surely common and necessary a long time ago, but nobody does it today (except, of course, veterinarians and horse breeders). However, this expression, clearly metaphoric in content, indicates that one should not point out defects in a gift. The communicative potential remains, even though the original niche has virtually disappeared.

Another proverb, “the coast is clear”, is also very indicative. It is a very frequent idiom to convey that one can speak without any danger. It refers to the coast being free from any possible threat, such as pirates or smugglers. The expression “no hay moros en la costa” is frequently used in Spanish with the same meaning, referring to the beach being free from the Berbers that terrified the population of coastal villages for a long time. The metaphor survived despite the fact that its communicative niche disappeared completely (piracy, smuggling, pillaging, etc.). This metaphor is a “living fossil” (Domínguez, 2016): a meme settled in a new and very stable communication niche that allows it to survive.

Even so, many past sayings lost their communicative value when the niche they were born into disappeared and they found no substitute. For instance, the famous work by Miguel de Cervantes, *Don Quixote*, shows many sayings and proverbs that can be difficult to understand for today’s readers. Many of them have lost their communicative value. The proverb “donde no hay tocinos, no hay estacas” (“where there is no bacon, there are no stakes”), used five times with different variations in the book, is very difficult to understand for today’s readers. This alludes to the old habit of setting stakes at the walls of country houses to hang pieces of meat to cure. It was often used metaphorically to refer to a family with economic hardships. But, at the same time, it was also used to suggest that a house without stakes could be occupied by Jewish or Muslim people, so it also carried xenophobic and demeaning meaning.

The series *The Life of Gargantua and of Pantagruel* by François Rabelais is very rich in expressions and sayings, many of which are hard to understand today. For instance, in book IV of *Gargantua*, we can read: “La mûle du pape ne boit qu’à ses heures” (“The mule of the Pope drinks only when it should”). The pontifical ceremony required the Pope to ride a mule: the animal was chosen because of its gentleness, and probably also because it was infertile. It was the opposite to a warrior’s steed. Thus, mules are known for leading a quiet and organized life. At Rabelais’s time, there was a common saying: “Être comme la mule du pape qui ne boit ni ne mange qu’à ses heures” (“to be like the Pope’s mule, who only drinks when it should”), used metaphorically for excessively sensible, contained, and boring people, who always avoid adventure and err on the safe side.

In both cases, the communicative niche has completely died out, and these proverbs have lost their metaphoric potential: the source domain and terminology are both gone. In this sense, we can consider it a dead metaphor (Lakoff, 1987), because the niche and the communicative potential of the metaphor have both disappeared. We can find similar examples in many old literary works, especially those that take place in the countryside, where the use of proverbs and paremiology is more abundant.

Thus, some memes from the past survive with surprising vitality, and others fall into disuse and disappear with their communicative niche. In order to understand them, resorting to complementary explanations is necessary, so much of its communicative effectiveness is lost.

Discussion and conclusion

In many aspects, the relationship between linguistic and biological processes is surprisingly similar. Charles Darwin (1871, p. 61) explicitly saw words as units of evolution subject to natural selection: “the survival or preservation of certain favoured words in the struggle for existence is natural selection”, he wrote in *Descent of man*. From the time of Darwin, many thinkers have envisioned cultural evolution as a Darwinian process. As stated by Buckley (2012), in the last decades it has become accepted that some aspects of human culture evolve by processes similar to biological evolution.

Many aspects of metaphoric evolution remind us about a biological process of natural selection, with a phylogeny and a speciation process (Domínguez, 2015a), and studying the genesis and development of metaphors just as we study living beings is possible. News develop in a communicative ecosystem with different habitats containing a number of niches. Metaphorical language is used to disseminate and understand those news, and is subjected to high selection pressure: only the most efficient metaphors survive to become memes and, later, even proverbs with extraordinary dispersion power (Figure 8).

These metaphors evolve over time and adapt to other news contexts. That is, they soon acquire a new use, something that might be considered a recontextualization (Linell, 2009; Semino et al., 2013). With each new event, new metaphors are generated, which can, in turn, transform into new memes that broaden the communicative niche. Since they behave like memes, metaphors are disseminated quickly, so they suffer important changes or mutations in a short span of time. These changes make them more competitive. They are subjected to constant selection pressure and adapt to new news content.

Metaphors can suffer other evolutionary processes such as co-adaptation, exaptation or symbiogenesis (Figure 8). These three cases involve metaphor combinations, but the symbiotic connection is stronger, lasts longer and has higher communicative reach. Shilperoord & Maes (2009) speak of fusion to refer to the union of two images, and Forceville describes the hybrid metaphor in terms of “violent fusion” (Forceville, 1996; Mulken, Lepair & Forceville, 2010). In the case of metaphoric symbiosis, this union is required, and one metaphor cannot be understood without the other. And, at the same time, the two symbiotic metaphors co-evolve together. The bodies of migrants were drawn with a lot of detail at first, and they slowly turned more schematic (that is, bits of visual information that were considered unnecessary were abandoned). The blue background experienced a similar process: the first cartoons showed a sea with waves, painted a lighter shade of blue so that the bodies floating on the water could be seen, but this was lost over time, as blue shades turned more and more similar to the one in the European flag.

Many of the studied metaphors are multimodal, combining explanatory texts and images. However, a significant increase of monomodal metaphors is observed when the metaphor is well-established and there is no need to accompany the image with an explanatory text. In communication terms, a metaphor is more powerful when it only needs the image to work, without the need for a text to guide the reader. In this sense, multimodality can favour creativity, since it allows us to explore more complex metaphorical content, but once the sense is clear and metaphors are widely known and established, they tend towards monomodality. The more unexpected, unpredictable and novel the union is between target domain and source domain, the greater creativity the resulting metaphor will show (Forceville & Renckens, 2013).

Each metaphor grows within a niche, which, in turn, develops in a habitat existing within a communicative ecosystem. The niche tends to grow with the increase of related news, in a case of niche construction (Figure 8). Therefore, there is an eco-evolutionary feedback: if more metaphors are formed from a founding metaphor, the niche will widen more and metaphors will develop further. Selection pressure will depend on many factors, both linguistic and socio-cultural, but it will also have a strong random component. Sometimes very creative metaphors are not efficient, and simple ones have an unexpected communicative development. There is a random component that we cannot and should not ignore. It depends on many different factors, such as the suitability / visibility of the medium, the relevance of the publication or the communication need.

In general, metaphors disappear with their communicative niche. R. W. Gibbs believes that a metaphor can only be truly dead if its ability to become a metaphor is lost, which never occurs (Gibbs, 1993). For Gibbs and other scholars, “idioms might once have been metaphorical, but over time have lost their metaphoricality

and now exist in our mental lexicons as frozen, lexical items” (Gibbs et al., 1997). Nonetheless, as we have seen, once useful and popular metaphors abound in literature, and many of them have turned into very obscure references for today’s readers, who would need an explanatory note to be able to understand them. This coincides with Bowdler and Gentner’s theses, published in *The career of metaphor* (2005), where they claimed that “evolution may continue until the metaphoric category has lost any sense of connection with the original base concept—that is, until it has become a dead metaphor”. They even proposed two categories: *dead metaphors* and *dead₂ metaphors*, depending on whether or not the source domain had already disappeared.

The same is true for sayings, many of which had metaphorical content in the past but have currently lost all their explanatory potential and turned communicatively ineffective. When readers face these extinct metaphors (or sayings), they perceive them clearly as ancient idiomatic expressions or linguistic figures, even if they do not understand their meaning. They do perceive the underlying linguistic mechanism, but do not find the keys for its interpretation. It is an extinct metaphor, a linguistic fossil, similar to an extinct biological species we are not able to identify.

On the other hand, as we have observed, there are sayings (understood as memes or past metaphors) which managed to survive the extinction of their communicative niche and colonize a different one. They are true living fossils whose epistemic potential lies on elements that are unrelated to their cognitive content.

Be that as it may, the use of metaphoric language must have been adaptive for *Homo sapiens*, since it allowed them to condense, establish and project large amounts of knowledge with few words. It was possibly born as a simple communicative tool associated to symbolic language, and provided the early *Homo sapiens* who possessed it with a large competitive advantage. Moreover, being an important creative action, the process must have been compelling, as it clearly represented a public demonstration of the user’s ingenuity. As Hidalgo Downing and Kraljevic Mujic (2013: 134) have shown, metaphor “is both a pervasive instrument of thought and communication in our everyday life and experiences, and, at the same time, a key resource for creative acts, poetic thought and innovation. Metaphor both structures and gives sense to our everyday life, enabling the creation of new realities, social change and innovation”.

Therefore, image, metaphor and symbol are inextricably linked, possibly since the early days of hominids, and are closely related to the origin of language. McLuhan (1964, p. 89) explained it with a well-chosen metaphor: “Language does for intelligence what the wheel does for the feet and the body. It enables them to move from thing to thing with the greatest ease and speed and ever less involvement”. If language is the wheel of intelligence, the acquisition of metaphorical language is the great engine of communication. And as Charteris-Black (2004:

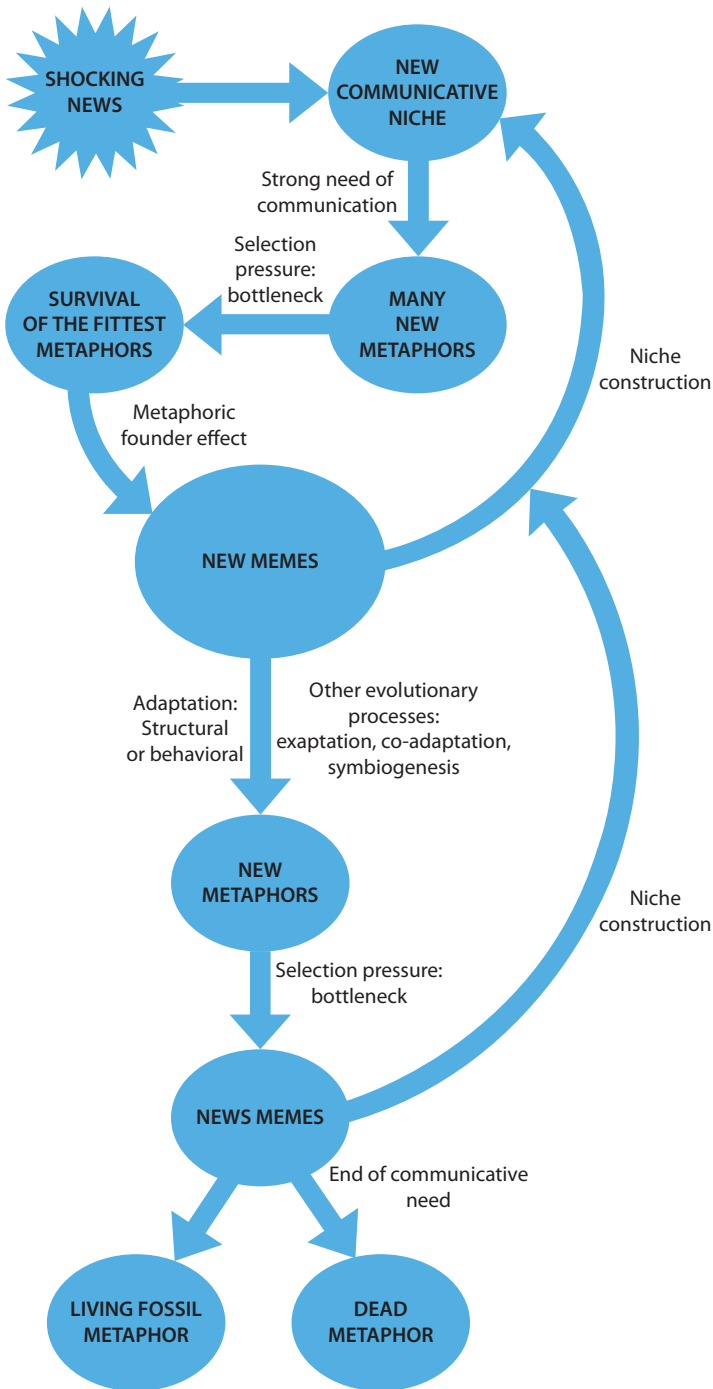


Figure 8. Conceptual flow chart of the origin, evolution and extinction of a metaphor set

p. 12) pointed out: “I hold the belief that a better understanding of language is the basis of creating a better society”. According to this brilliant claim, metaphors should have a pre-eminent place in the study of language.

I hope that this analysis of the conceptual evolution of metaphors will be interesting to linguistics and lead to a deeper understanding of how metaphors evolve as powerful memes, and how communicative ecosystems change over time. Ultimately, I think linguists can contribute important and necessary insights to evolutionary theory. As Hidalgo Downing & Kraljevic Mujic (2013) relevantly noted, the transversality and integration of ideas from different fields can help us to understand how metaphors are produced as a cognitive, social and cultural phenomenon.

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Sensory landscapes

Cross modal metaphors in architecture

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This chapter describes the ways architects use language to evoke the visual, olfactory, tactile and interactive experiences afforded by buildings. It discusses how architects transfer their perception of space as knowledge, and how this knowledge is communicated by using figurative language in the architectural review genre. The task of reviewers is to translate those experiences into language in a form that readers can understand and, presumably, relate to through their senses, and do so using metaphorical language that combines information from domains other than architecture as well as from the senses. In this regard, the chapter is ultimately concerned with exploring the ways in which metaphor helps shape the sensory landscapes of architects as staged in architectural reviews.

Keywords: built space, architectural reviews, cross-sensory metaphor, synesthesia, multimodality

1. Introduction

The threshold quality of the body in human thought has a long story in theories that attempt to explain how people think and talk about the world. The imaginative and anthropomorphic basis of logos is pivotal in such influential works as Aristotle's *De Anima*, Giambattista Vico's *Scienza Nuova*, Kant's *Critique of Pure Reason*, or Merleau Ponty's *Phenomenology of Perception*, all of them sustaining that the body is the seat of knowledge and inspiring the sensual dimension of cognition advocated by contemporary work in anthropology, psychology and neuroscience (e.g., Binder & Desai, 2011; Howes, 2003, 2009; Howes & Classen, 2014). For instance, while anthropologist David Howes describes cultures as "ways of sensing the world" (Howes, 2003, p. 16), psychologists Borghi & Cimatti (2010, p. 772) see cognition as socially and bodily situated plus mediated through

language, and relying on what they call our *sense of body*, i.e., a notion explained as “grounded first in sensation, then in action, and finally in language”. Likewise, such related notions as *embodiment*, *enactivism* or *situated cognition* are fundamental tenets in various cognitive approaches, for instance, Embodied/Situated Cognition (e.g., Barsalou, 1999, 2010; Beveridge & Pickering, 2013; Kirshner & Whitson, 1997; Lave, 1988; Tomasello, 1999), Enactivism (Ellis & Newton, 2005; Thompson, 2007; Varela et al., 1991), or Cognitive Linguistics (Lakoff & Johnson, 1980, 1999; Lakoff, 1987; Langacker, 1987; Talmy, 2000).¹

In like fashion, the human body and experience have become trending topics in architecture. A case in point is the exhibition organized by the Royal Academy of Arts in London called “Sensing Spaces. Architecture Reimagined” (25 January – 6 April 2014). The exhibition was introduced as follows:

How does the room you’re sitting in make you feel? What is it about the soaring roof of a railway station, the damp odor of a cellar, the feel of worn stone steps beneath your feet, the muffled echo of a cloister or the cozy familiarity of your lounge that elicits glee, misery, fear or contentment? We’ve tasked seven architects with reawakening our visitors’ sensibilities to the spaces around them – bringing to the fore the experiential qualities of architecture.²

The role of the senses in understanding space is further stressed in the official guide to the exhibition, where we find that “knowing how to ‘see space’, or how to be spatially attuned, is an ability with which we are all born”, and this draws upon “a wide range of sensual and spatial experiences – rough and smooth, warm and cold, of being above or below, inside, outside or in between, exposed and enveloped”.

It is interesting to note that, although understanding space starts by learning how to *see* it, vision is not the only sense at work in the process. Indeed, against the visual emphasis of some architectural trends and works, contemporary architects are re-vindicating a more sensuous, multimodal approach that restores human experience at the center of architectural design (Bloomer & Moore, 1977; Pallasmaa, 2005; Seamon, 2007). For instance, renowned for his concern with the tactile and sensory qualities of buildings, Peter Zumthor (1998, p. 57–58) claims that “A good architectural design is sensuous. [...] all design work starts from the premise of this physical, objective sensuousness of architecture, of its materials. To experience architecture in a concrete way means to touch, see, hear, and smell it.”

In this chapter, I explore the language used by architects to translate the sensory experiences of built spaces in architectural reviews (hereafter, ARs). I pay particular attention to the metaphors involved in the creation of perceptual, sensuous

1. See also the information at <http://www.embodiment.org.uk/>

2. <https://www.royalacademy.org.uk/exhibition/sensing-spaces>

‘textual’ spaces in the genre, and the cross-modal, synesthetic quality of many such metaphors, i.e. the conflation of different sensory modalities in their instantiations. The discussion draws upon my previous work (Caballero, 2006; Caballero & Díaz-Vera, 2013; Caballero & Paradis, 2015) as well as an ongoing project exploring metaphorical motion in specialized genres written in English and Spanish. For the purposes of this paper, I am using a corpus of 150 texts (120,000 words) written in English and retrieved from well-known print magazines written by and for architects (Architectural Record, The Architectural Review, Architectural Design, Architecture, Architecture Australia, and Architecture SOUTH) and architecture websites (<http://www.arcspace.com>, www.archdaily.com, <http://architizer.com>, <http://www.architectmagazine.com>). Unless otherwise indicated, all the examples in the chapter come from this corpus.

2. Reviewing built space: The genre of architectural reviews

As discussed elsewhere (Caballero, 2006), the architectural review is a critical genre in the discourse of architects, and has largely contributed to (a) shaping architecture’s rationale, (b) fostering architectural schools and aesthetics, (c) keeping architects updated with their colleagues’ work and, therefore, (d) educating both people interested in architectural topics and future members of the community.

As happens with review practices in general (e.g., book or film reviews), evaluation is the main *raison d’être* of ARs. However, ARs are particular in that they are mostly written by and for architects, and always provide graphic information (photographs, plans, etc.) about the building under evaluation, which means that evaluation is always substantiated by technical and constructive information, i.e., description. The rhetorical structure of the genre is informed by these descriptive and evaluative goals and, thus, ARs are typically organized in the three main sections of Introduction, Description, and Closing Evaluation which, in turn, are internally organized in several textual sequences in agreement with the way reviewers choose to accomplish those goals. The prototypical structure of the genre is summarized in Table 1 and exemplified in Example (1).

Table 1. Rhetorical structure of the architectural review

TITLE + LEAD
INTRODUCTION
Creating Context
Introducing the building
First evaluation of the building
DESCRIPTION
Providing technical/budget/construction details of the building
Outlining the building's general organization and/or appearance (overall plan)
Describing the parts/components of the building
Highlighting parts of the building
CLOSING EVALUATION
TECHNICAL CARD
VISUAL DATA + CAPTIONS

- (1) [TITLE] MARITIME RIGOUR[LEAD] Poised on a clifftop in Canada's eastern Maritime provinces, the simple geometry and materials of this economically built house recall the region's sturdy vernacular farm and industrial buildings. [INTRODUCTION] Spectacularly located on a cliff edge on the tip of Cape Breton island, the Danielson House is a retirement home for a landscape architect and a meteorologist. [...] The house was built on a very tight budget, using techniques of prefabrication [...] In Canada's Maritime provinces, there is a long tradition of treating buildings like boats, as lightweight, mobile structures sitting gently on land, ice or water. The work of MacKay-Lyons also derives ideas of form and massing from the rude barns, sheds and fishing shacks in the Maritimes' rocky landscapes, and the Danielson residence extends this rigorous yet hearty architectural lineage. [DESCRIPTION] The house is a modern version of a vernacular lean-to structure and its parti is equally simple and economical. [...] Except for a small projecting bay containing a fire and alcove, the ocean front is glazed, affording splendid views and drenching the interior in a soft, clear light. The alcove has its own small window, providing a sense of intimacy and enclosure amid the cavernous main space. Lined with timber, the interior is warm and womb-like. A plane of corrugated metal envelops the rectilinear volume of the house, cranking downwards to clad the upper part of the walls as well as the roof. The geometry is bold and simple reflecting a kinship with the region's farm and industrial buildings. A long timber deck links the house with a smaller structure used as a belvedere for sitting out or quiet contemplation. [CLOSING EVALUATION] From a distance, house and

belvedere resemble a boat towing a smaller dinghy in its wake, reinforcing the project's robust, nautical spirit.

The reviewer of (1) has chosen a nautical analogy in order to open and close his commentary of this house in Canada – a befitting choice given its location. The building is first introduced and evaluated in the title and lead, which already point to the two main traits upon which the assessment rests, namely the successful combination of boat-like and vernacular structures in the house at issue. The latter is the main line followed in the Description part, while the Closing Evaluation goes back to the nautical theme introduced in the Title and presents the house as resembling “a boat towing a smaller dinghy in its wake”.

Together with showing how an initial image – in this case, a boat analogy – articulates an AR, Example (1) incorporates language motivated by some of the most recurrent metaphors in architectural discourse. This is the case of the textile term “clad” conventionally used to refer to buildings’ covering surfaces, the language- and motion-motivated “vernacular” and “lean-to” labelling two types of house, personifying lexis such as “rude”, “lineage” or “kinship”, and motion verbs such as “poised”, “projecting” or “cranking down” describing what the built spaces thus predicated look like. Other figurative terms in the passage are more sensuous in flavor, for instance, describing light as “drenching” an alcove – i.e., as a fluid – and, as a result, “softening” it, or qualifying spaces as “warm”, “cavernous” and “womblike”. Adjectives like these point to the multisensory, multimodal quality of space and, by implication, architects’ work, i.e., the fact that spaces are not only visualized or allow for movement inside, but also feel like in particular ways – even if the meaning of adjectives such as “womblike” or “cavernous” as applied to domestic spaces may be difficult to grasp. In the following section I discuss the role of metaphorical language in verbalizing the experiential, sensory experiences afforded by buildings.

3. Re-sensing built space through metaphor

Most metaphors in architecture draw upon the natural sciences, cloth making and textiles, spatial mechanics, linguistic interaction and music (Forty, 2000; Caballero, 2006), and motivate both architectural jargon as well as more innovative language. For instance, buildings’ functional and structural properties are often referred to in organic and mechanical terms (e.g., terms such as *skin*, *skeleton*, *bowels*, *rib*, *mechanisms* or *mechanics*), whereas structural linguistics informs views of buildings as intelligible and readable *texts* which result from the correct combination of *lexical* devices in accordance with *grammatical* rules. Other conventional

metaphors come from cloth making and music, two activities that motivate a large amount of architectural jargon (e.g., *cladding*, *jacketing*, *sheathing*, *sheeting*, *curtain wall* and the ubiquitous term *rhythm*), and also from any manual, craft practice that involves shaping raw materials (e.g., clay) into an architectural entity (e.g., architects *cutting*, *dissecting*, *slicing* spaces). Finally, given the visual concerns of the discipline, any entity with a clear shape is also recurrently used both for thinking a building and, later, for describing and referring to it. Table 2 shows the most common metaphors in architectural discourse and some of the language thus informed.

Table 2. Domains, metaphors and instantiations

TEXTILES

ARCHITECTURAL PRACTICE IS CLOTHMAKING

knit, sew, stitch, thread, warp, weave

BUILDINGS/CITIES ARE CLOTH

cloth, fabric, grain

BUILDING ELEMENTS ARE PIECES OF CLOTH/CLOTHING

apron, blanket, cap, cladding, coating, curtain wall(ing), sheet, skirt, sleeve, veil

LANGUAGE

ARCHITECTURE IS LANGUAGE

idiom, imagery, edit, idiom, language, lexicon, punctuate, translate, vocabulary

BUILDINGS ARE TEXTS

comprehensible, legible, lyrical, muted, quiet, read(ing), rhetorical, vernacular

NATURAL SCIENCES

BUILDINGS/BUILDING PARTS ARE ORGANIC ENTITIES (PLANTS, ANIMALS, OR PARTS OF THEM)

arm, beak, blind, bone, butterfly, carapace, cell, feminine, fin, masculine, membrane, muscular, pod, rib, robust, shell, sinewy, skeleton, slender, spine, trunk

INANIMATE ARTEFACTS

BUILDINGS/BUILDING PARTS ARE 3-D EVERYDAY ENTITIES

boat, book, boomerang, bowl, box, fan, horseshoe, lozenge, ship, wedge, zeppelin

BUILDINGS/BUILDING PARTS ARE GEOMETRIC ENTITIES/FIGURES

cone, cube, parallelepiped, prism, rectangle, ring, sphere, spiral, strip

BUILDINGS/BUILDING PARTS ARE ALPHABET LETTERS

H, L, I, U, T, V, Z

MANUAL PRACTICES / CRAFTS

BUILDINGS ARE PLASTIC, MALLEABLE ENTITIES

bisect, break, carve, chamfer, chop, cleft, cut, dissect, extrude, flexible, fold, fracture, fragment, gouge, hew, hollow, incise, laminate, peel, pierce, plastic, skew, slash, slice

The knowledge mapped from the domains shown in this table responds to the particularities of a complex discipline driven by manifold concerns (e.g., aesthetic, intellectual, technical, social), which makes it difficult to classify architectural

metaphors into clear-cut types. Indeed, multiplicity is a salient characteristic of many such metaphors and, thus, while some metaphors are clearly concerned with the performance or behavior of built spaces (i.e., abstract information) or with their external appearance or looks (i.e., visual information), a good amount of metaphorical language is more deceptive information- and classification-wise. Before taking this point further, compare the following examples:

- (2) Cognitive linguistics is not of course the same as cognitive grammar, which represents just one of the numerous strands in this loosely **woven** fabric.
(Langacker, 2002, p. ix)
- (3) Constructed from indigenous eucalyptus hardwoods, this element has, as Andresen says, “a warp and weft as if **woven** from the trees.”

Although *woven* alludes to the structured quality of both topics in (2) and (3), the term carries different information in each case, as befits such different metaphorical targets as a theory and a building. Of all the possible traits of cloth making, *woven* in (2) is solely concerned with making abstract structure accessible by equating it to physical structure, i.e., illustrates the well-known metaphor (ABSTRACT) ORGANIZATION IS PHYSICAL STRUCTURE (Grady, 1997). The terms *warp*, *weft* and *woven* in (3) are also concerned with the way elements are combined – structured – in the house at issue; yet, here the main focus is on the patterned quality of the final result as visually perceived. Indeed, when asked to explain the expression, one of my architect-informants pointed out that it brought to mind the typical texture of sackcloth, i.e., combines visual and tactile information.³ The different concerns of the textile language in (2) and (3) may, nevertheless, be missed if we formalize their underlying metaphors as THEORIES ARE CLOTH and BUILDINGS ARE CLOTH respectively.

A similar sensory focus – in this case, visual only – can be discerned in the use of such conventional adjectives in architectural discourse as *blind* or *mute* – both seemingly portraying buildings as human beings, yet concerned with the lack of openings and, often, lack of visual conspicuity and/or excess. Thus, the type of wall known as a *blind wall* is an opaque, solid wall with no voids, and a *mute*, *quiet* building is a building that does not bring attention to itself, as beautifully explained by Peter Zumthor in his well-known book *Thinking Architecture*:

3. Some of the examples belong to previous research discussed in Caballero (2006) where I made use of several informants in order to fully interpret the metaphors found in the architectural text corpus.

Good architecture should receive the human visitor, should enable him to experience it and live in it, but it should not constantly talk at him. [...] To me, buildings can have a beautiful silence that I associate with attributes such as composure, self-evidence, durability, presence, and integrity, and with warmth and sensuousness as well; a building that is being itself, being a building, not representing anything, just being. (Zumthor, 1998, p. 32)

Of course, language-motivated terms such as *mute*, *quiet* or *silent* are fully compatible with a personified view of built space as “talking” to us – personification being the oldest metaphor in architecture. However, in the specific context of the discipline, they are also concerned with sensory information, i.e. with conveying what buildings feel like. The relationship between metaphor and the senses in architecture is the topic of the following section.

3.1 Metaphor and the senses

When we think of places where we have been to, we often recall what they sounded and, particularly, smelled like.⁴ However, although sensory data are a strong component of our spatial memories, and we often remember those data in vivid, clear-cut terms, the language used for describing them is less specific, and often cuts across several senses. In fact, we often draw upon various sensory experiences and, for instance, often describe places as *bland*, *soft*, or *quiet*, i.e., by means of taste, touch and sound language. By way of illustration, consider the terms in bold in the following description of a guesthouse in Virginia (US):

- (4) Located in a **quiet** downtown neighborhood, [the house] has lofted ceilings and skylights to **lighten** the space. **Soft** and **muted** colors enhance the **warm** atmosphere and understated elegance of your home away.
(<http://www.va-guesthouses.com>)

Architects also qualify spaces as *quiet* or *muted*; however, such terms are less concerned with the absence of real sound or noise (i.e., spaces that reverberate), but often refer to the visual impact of buildings upon the observer or its surroundings. For instance, a search in Google for *quiet architecture* yielded the following:

- (5) Building new is not necessarily **making a positive statement**; it is sometimes synonymous with an egocentric desire to stamp individual style on the environment or create a personal monument to creativity. This is the architecture that **shouts** what could have been **whispered**
(www.rabih-hage.com/about/quiet-architecture/quiet-architecture/)

4. Indeed, architects point out that the most persistent memory of space is its smell (see Rasmussen, 1959; Clements-Croome, 2004).

- (6) The simple addition of the wall also helps resolve a number of awkward angles in the main floor [...] the wall **subdues** the volume and the angles become background elements rather than **visual statements**. [...] two large “sliding walls” close off the opening when desired [...] and **visually warm** the space up a bit. [blog.buildllc.com/2010/10/invisible-architecture]

Indeed, although language metaphors typically focus on building typologies (e.g., *vernacular* buildings) and the elements and conventions followed by architects when designing a building (referred to as architecture’s *vocabulary*, *rhetoric*, *imagery* or *syntax*), they are also often used to describe the visual properties of buildings. This is the case of passages (5) and (6) where the notion of assertiveness implied in *statement* and the sound differences between *shout* and *whisper* are used to discuss what buildings look like. Other sound-related terms similarly concerned – albeit not related to language metaphors – include *raucous*, *discordant*, *cacophonous* or *jarring*, all of which provide a more dramatic assessment of built spaces, as shown in the passages below, where they co-occur with tactile expressions (*fragile*, *sensory whipping*).

- (7) Despite the violence of its sun and the stark profile of its mountains, the Sonoran desert around Tucson is, like most deserts, visually **fragile** – easily thrown into imbalance by a **jarring** building.
- (8) Juxtapositions of sleek finishes [inside the building] such as citrus-colored partitions and tiny halogen spotlights feel **cacophonous** against the rough timber walls and columns.
- (9) [Chief architect] recalls, “They said, ‘Maybe this building could be a little **quieter**.’” [And they] set to work defining just what “**quiet**” could mean, esthetically speaking. “We talked a lot about trying [...] to make it a **quiet** place.” That discussion soon led to ideas of garden, the metaphor that began to inform their design studies. [...] nonliteral notions of garden did more to germinate this inventive building’s abstract qualities as a salve for the **sensory whipping** delivered by its suburban context. [...] The building’s main event is inside [...] the architects created an alternating **rhythm** of angled surfaces to bounce light and disperse sound. [...] the sparsely landscaped lawn was [...] a way to buffer the **noise**, both aural and visual, that is certain to kick in when the adjacent corner lot becomes a gas station or convenience store.

Interestingly, if aural terms are used for discussing visual experiences and effects, borrowing visual terms to refer to aural phenomena is also true. For instance, architects need to take into account both *acoustic(al) glare* (the harsh quality of sound inside a building caused by walls or surfaces that are too flat and too

smooth) and *acoustic transparency* (the acoustic fidelity of sound waves when they pass through certain materials) when designing buildings such as theatres or concert halls. Examples (10) and (11) address both issues:

- (10) The concert hall seats 1400. [...] The gentle convex curves of the side wall panels provide important early lateral reflection, slightly diffused by the curvature to avoid **glare** from highly directional instruments. The strong early sound is balanced by a warm reverberant sound developing within the volume of the auditorium, which is [...] cocooned within ‘**buffer**’ zones and has a double-skin upper wall and roof construction providing excellent protection from external noise.
[www.anvilarts.org.uk/about-us/history/architecture-and-acoustics]
- (11) The Vanbrugh proved too big, and the whole place was **acoustically transparent**, causing everyone to creep about when the theatres were in use.

The most ubiquitous sound term in architectural discourse, however, is *rhythm* (in passage 9), a musically informed noun used to refer to the sequential arrangement of structural and ornamental elements in buildings. The following photograph of the MUA (the Museum of the University of Alicante) illustrates one such rhythmic spatial arrangement:



Figure 1. Museum of the University of Alicante. Photograph property of the author

Likewise, architects' intervention in this regard is often expressed by verbs like *orchestrate* and *choreograph*. MUSIC metaphors are illustrated in the following examples:

- (12) Expression and function coincide in white-painted concrete sun-shading blades separating each window alcove: They introduce a **driving rhythmic beat** to the façade [...].
- (13) The sidewalls (and ceilings elsewhere) are covered in acoustic paneling sheathed with bronze insect screening and blackened-steel strips in an irregular **jazz-beat** pattern inspired by the old bakery ceilings in the main dining room.
- (14) Moneo modulates the rectangular openings of [the balconies] floor by floor; each level of this outermost skin is set to its own **syncopated rhythm**. “This facade,” explains Moneo [...] is **organized as a musical score**: numerically.” [...] Each level of columns follows its own **regular rhythm**; together, **the layers read as simultaneous melodies or separate instruments playing their own part of a symphony**. This facade is Goethe’s credo of frozen music writ large – and literal.
- (15) Kalach tactfully neutralizes these surroundings by creating a luminous internal labyrinth defined by floating wail planes, light-filled voids and reflecting pools of water. [...] Through carefully **choreographed** handling of light and fastidious attention to detail, Kalach **orchestrates** an extraordinarily **lyrical** spatial and sensual experience.

The music metaphors in these examples are thoroughly exploited for discussing the visual properties of Moneo’s and Kalch’s buildings, finally assessed as a *symphony* and a *lyrical* space respectively.

While the terms discussed so far use aural terms to discuss visual topics, the growing concern in the discipline with real aural properties of space is reflected in the following descriptions of the house in (16) as concerned with *aural boundaries* and providing *soundscapes*, and of cathedrals as *resonators* in (17):

- (16) [The architects] infuse a speculative domestic environment with digital audio technology. Their design capitalizes on the augmentation of **aural-visual boundaries** via technological interventions, ultimately recasting the house from a private and insulated environment to that of a hybridized interactive site. [...] The communal heart of the house, the kitchen, doubles as a sound command centre, a place where occupants can gather to design impromptu original domestic **soundscapes** by mixing media-sponsored sounds with the ambient noises of the neighborhood.
- (17) Gothic cathedrals such as Chartres, were valued as much for their acoustic qualities as they were for their visual principles: they functioned as sacred **resonators** for the recitation of the Christian word.

Although mainly concerned with sight, sound and musical language may also express knowledge accessed through our sense of touch. This is because spatial sequences and patterns, i.e., space's rhythm or choreography, ultimately endow built spaces with a textural or tactile 'feel' – even if such information is first accessed via the eyes. In this regard, architects' use of musical lexis in spatial descriptions is unmistakably cross-modal in that language typical of auditory experiences conveys what built spaces look and feel like – i.e., involves the senses of hearing, sight and touch.

Indeed, for architects the texture of buildings goes beyond to what can be felt with the human hand, and thus standard definitions of texture cover both the tactile and visual quality of buildings' surfaces. Accordingly, when architects design a building they also consider what is known as *optical texture*.⁵ For instance, the façade of the Palazzo Medici in Florence typically illustrates the textural properties of built artefacts as resulting from, yet not limited to, rhythm, repetition and the use of material, and the same is the case with the following description of a metal mesh as *texturizing* the space it covers:

- (18) Cambridge Architectural Metal Mesh **Texturizes** Houston Metro's Katy Grand Park & Ride. [...] Although metal mesh is hung vertically on most projects, a combination of upright and sideways-mounted panels were used on the Katy garage to provide an engaging aesthetic feature to the façade and corner stairwells.

[<http://cambridgearchitectural.com/press/cambridge-architectural-metal-mesh-texturizes-houston-metro%E2%80%99s-katy-grand-park-ride>]

Nevertheless, the metaphors most related to spatial texture draw upon the domain of textiles and cloth-making or present buildings as malleable, plastic entities. Although architects use both metaphorical sets to refer to the elements and combinatory procedures involved in building design (e.g., jargon terms such as *cladding*, *curtain wall*, *apron*, or *penetration sleeve* named after diverse textile and clothing artefacts), the language thus informed also suggests the distinct quality of both the materials used by architects and the finished products. Choice of metaphor results in buildings being portrayed along various degrees of tangibility; for instance, the metaphor BUILDINGS ARE TEXTILES offers a view of space as concrete, physical matter by (a) presenting built arrangements as *cloth* or *threads* susceptible to being woven into different patterns and having a particular feel (*fabric*, *grain*), (b) qualifying those arrangements as *tightly-knit* or (c) referring to their outer

5. See the pedagogical document "Arch 121. Introduction to Architecture I" offered by the Architecture Department in Çankaya University (www.arch121.cankaya.edu.tr)

layers (both material and chromatic) as various types of *cladding*. The following examples illustrate the various instantiations of the metaphor.

- (19) **Tapestry Weaving.** [...] The masterstroke is the light and elegant bridge over the museum forecourt. [...] It is, says Couvelas, ‘a **thread darning the hole caused by the excavation**,’ and, **in the darning, the pattern of the old weave of the city has been brought to the surface to take part in the modern tapestry.**
- (20) [The building] is **wrapped in tones of wheat and dirt brown** baked onto the Colorbond metal **cladding**.

Likewise, descriptions of space as – unspecific – raw matter that architects manipulate and/or *sculpt* in various ways bears a similar textural flavor. This figurative scenario, which may be formalized as BUILDINGS ARE MALLEABLE ENTITIES, is used to assess a high-rise in New York by de Portzamparc in (21), where it co-occurs with textile language:

- (21) Instead of **stacking the building blocks wedding cake-style**, de Portzamparc **chamfered them, pinched them, skewed them, and sloped them**, discovering a few tricks along the way. [...] De Portzamparc dressed the tower’s faceted facade in a sexy ensemble of green and white glass. To the east [...] the architect draped a veil of pure white glass sandblasted with shadowbox patterns; to the west of the seam he switched to a gauzy green glass specked with an almost invisible grid of fritted dots. The glass skin [...] becomes a luminous folded and pleated sheath. Like a sexily dressed woman, the building reveals glimpses of itself through the fabric of its enclosure.

The metaphors and examples discussed so far suggest that buildings’ external appearance and texture seem to matter the most in architectural appreciation, and that communicating both attributes often involves the blending of distal (sight, sound) and proximal (touch) perceptual experiences in the same figurative expression (e.g., nouns such as *fabric*, *grain* or *rhythm* and adjectives *crisp*, *rugged* or *jarring*). Put differently, the texture of buildings is as important as any other sensory trait, yet in architecture this is felt through the eyes, the ears and, as discussed later, the whole body.

In the light of such examples, one way to approach the metaphors found in architectural reviews may be to pay attention to both the (source) domains informing them as well as the sensory information suggested by their different instantiations (i.e., the target sense), even if their full potential is best discerned when seen in their context of occurrence. Table 3 provides a possible organization of such cross-domain/sense mappings.

Table 3. Metaphor and the senses

Source domain/sense	Target sense	Metaphor
LANGUAGE (SOUND) quiet, mute(d), grandilo- quent, hushed	SIGHT invisible, inconspicuous, discreet	BUILDINGS ARE PEOPLE
SOUND (HEARING) jarring, cacophony, cacopho- nous, discordant, noise, tone down, resonate	SIGHT discreet, well-integrated SIGHT + TOUCH arrangement, repetition,	BUILDINGS ARE SONORAN EXPERIENCES BUILDINGS ARE MUSICAL PIECES
MUSIC (HEARING) rhythm, rhythmic, beat, melody, orchestrate, choreograph, lyrical	texture	
SOUND (HEARING) resonator, soundscape, sonic window	HEARING	N/A
TEXTILES/CLOTH (SIGHT, TOUCH) coarse, coarseness, knit, fabric, grain	SIGHT + TOUCH	BUILT SPACE IS CLOTH(ING)
TEMPERATURE (TOUCH) warm, warmth, cold, cool	SIGHT + TOUCH	N/A
TOUCH fragile, hard, soft(en), light(en), tactile, coarse, weight, heavy, sharp	SIGHT + TOUCH	BUILDINGS ARE MALLEABLE ARTEFACTS
SIGHT acoustic(al) glare, transpar- ency	HEARING	N/A
MULTIPLE SENSES cavernous, crisp	SIGHT, TOUCH, HEARING	N/A

The language discussed so far illustrates the importance of the senses in both designing and experiencing built spaces, as acknowledged by the people in charge of making them possible. However, those experiences are not always experienced one at a time, but often rely on the interaction of several senses. For instance, while *rhythmic* arrangements in buildings may be apprehended in one shot, particularly when observed from a distance, such arrangements are better appreciated as one moves inside them, i.e., is a cross-perceptual event, as also happens with feeling the *choreographed*, *warm*, or *light* quality of space. For together with discussing the aesthetic, technical and constructive properties of architectural projects, a well-crafted review also attempts to translate into words a holistic experience

of buildings, which often starts from an assessment of their visual properties to gradually guide the readers through their inner spaces, describing them in a way that engages their readers. The genre's provision of virtual tours inside buildings relies on motion language of various sorts, which, like the expressions seen so far, responds to various architectural concerns, starting with the provision of the perceptual landscapes afforded by built spaces. As it is, some architects relate motion to other metaphors used in the discipline and suggest that "the idea that architecture could be seen as 'frozen music' already suggests arrested movement" (Jones, 2001, p. 48). Motion language in spatial assessment is the topic of the next section.

4. Multimodal, dynamic spaces

Architecture is ultimately concerned with feeling which, as seen previously, is often accessed which goes beyond looking – a long-lasting assumption in the discipline, yet gained force after the 1950s phenomenological turn in the discipline (see, for instance, Seamon & Mugerauer, 1985; Norberg-Schulz, 1980; Hauptmann, 2006). Drawing upon Gibson's (1966) views of senses as *systems* rather than merely physiological receptors, architects like Rasmussen (1959), Bloomer & Moore (1977) or Pallasmaa (2005, 2009, 2011) have underlined the role of the haptic system in experiencing three-dimensionality, i.e., the *sine qua non* of architecture, since they see haptic experiences as simultaneously combining feeling and doing and, most interestingly, encompassing, directly or indirectly, most other senses, particularly motion.⁶ For instance, Bloomer & Moore (1977, p. 86–88) describe the temple complex at Monte Alban (Mexico) as follows:

The temple complex [...] seems to have been built around the act of climbing. There, thousands of feet above the valley floor, a flat plaza was made from which each temple was entered, up a flight of steps, then down, then up again higher to the special place. To arrive at the largest temple, one went up, then down, then up, then down, then farther up again. [...] getting there is *all* the fun.

(Italics in the original)

Likewise, Yudell (1977, p. 59) claims that "all architecture functions as a potential stimulus for movement, real or imagined", a belief that led him to state that basic

6. In *De Anima*, Aristotle offered a view of motion as a complex, holistic 'sense' referred to as *common sensible* and encompassing physical properties indirectly perceived by more than one sense. This classical notion is revamped by contemporary anthropologists (Howes, 2007, 2009) and literary scholars (Heller-Roazen, 2007) claiming for the existence of a holistic sense called *common sense* and unifying plus coordinating the other – acknowledged – five senses and their physical instantiation or expression.

architectural experiences have a verb form. Indeed, ARs make a frequent use of motion verbs in order to describe spatial artefacts – from the conventional rendering of buildings as *rising up* or *running along* their sites to flashier cases that present them as “sliced, canted, jostling spaces that slide around and between the concrete sections like a bustling crowd.”

Of course, this dynamic rendering of buildings is not exclusive of architectural texts, but is a specific case of the phenomenon known as *fictive* or *abstract motion* in cognitive linguistics, where the use of motion verbs to describe roads, paths, rivers etc. is explained as a means of foregrounding their path-like configuration, i.e., focalizing its users as if moving along them (Langacker, 1986, 1987; Talmy, 1996; Matlock, 2004). In like fashion, architects use motion verbs to describe the prospective, imaginary tours that spaces offer to their users. However, this is not the only use of fictive motion in the discipline, and corpus data yield an abundant number of motion cases exclusively concerned with providing visual information about buildings, i.e., with describing the shape suggested by the buildings’ imaginary motion in space, referred to as *visual dynamism* in Jones (2001, p. 49). The interactive and visual dimensions of motion are addressed in the essay “Stillness” by the architectural firm Jones, Partners Architecture, where we find that “movement is not only a means but can be an end in itself; not simply alteration of spatial relationships [...] but a pleasing visual or haptic sensation” (Jones, 2001, p. 50). Before taking these points further, consider the following review of the national museum of contemporary art in Helsinki:

- (22) The [...] volume becomes the dominant form **reaching out to** the natural landscape. [...] to the west are the information/ticket desk, the museum shop and a cafe which **opens out onto** a public terrace and the reflecting pool. A steel framed glazed canopy **extends out** from the vertical fissure [...] A ramp **climbs up** the curved east wall of the void, **arriving** at the critical crossing point [...]. Suites of enfilade double-height galleries **step up** the building in four split levels [...] The underlying order of the building cannot be understood from a single vantage point, but **unfolds** cinematically as you move through a **landscape** of interior space. This is an architecture of **promenade**, yet without a prescribed or privileged **route**. Multiple lifts, stairs and ramps combine with the split-level galleries to create many possible **itineraries**. Passage between rooms occurs in a zigzag **trajectory** [...]. **Circulation** always **returns** to the central orienting void. [...] the wall also **rotates** from a 9.5-degree outward **tilt** at its southern end [...]. The north end of the building **twists towards** the west [...] Much of the daylight in the building [...] is diffused by translucent glass which both intensifies the weak Nordic light and imparts a sense of quiet abstraction and detachment from the life of the city. So movement through the building becomes an introverted **journey**.

The motion language in this passage illustrates two metaphors with two different concerns. On the one hand, verbs such as *reach out*, *open out*, *extend*, *climb*, *step*, *unfold*, *rotate*, *tilt* or *twist* point to a metaphor that may be formalized as BUILDINGS ARE DYNAMIC/KINETIC ENTITIES whereby particular layouts or appearances (the metaphorical targets) are seen as reminiscent of the kind of movement encapsulated in the verbs (the metaphorical sources), i.e. is visually concerned.

The recurrent use of such language in architectural discourse suggests that understanding certain spatial arrangements and topologies draws upon a more basic understanding of particular ways of moving (for a detailed discussion, see Caballero, 2009, 2017), and is compatible with Talmy's (1996) notion of *ception* as encompassing both perception and conception, and the image metaphor FORM IS MOTION discussed, albeit summarily, by Lakoff and Turner (1989). Indeed, the verbs that best illustrate this visual bias are denominal verbs such as *rake*, *bunch*, *ramp*, *scissor*, *fan*, or *corbel*. As illustrated in Examples (23) and (24), the main trait mapped onto spatial arrangements is the whole configuration or shape of the noun entity used as a verb (*rake*, *curve*, *crank*), whereas the adjoined particles (*up*, *backwards*) express the direction of motion:

- (23) At north and south ends are stands for hardier (and poorer) fans, unshaded and **raking up** at a steep angle.
- (24) Here, the walls **curve gently backwards** until they **get to** the seventh floor, where they **crank** quite severely **back** to obey planning profile rules.

In turn, reference to the museum's inner spaces by means of terms such as landscape, promenade, itineraries, trajectory or circulation points to the metaphorical scenario MOVING WITHIN A BUILDING IS MAKING A JOURNEY whereby moving inside buildings is described as a journey – as explicitly mentioned at the end of the review. A similar view of buildings as *both* supplying people with spaces that allow movement as well as moving entities themselves is shown in the following example where a building designed as a *translation* of the town where it is located prompts to the urban metaphor used in its assessment:

- (25) “The whole idea,” says Mayne, “is to instill a constantly shifting sense of what's inside and outside that engages people with the building, site, and views.” Despite the external complexity, the basic parti of the bank building is a three-sided doughnut, with corridors that **triangulate around** a light well [...] “You're always moving across bridges, through thresholds. From one building to another, **you're experiencing movement as part of a journey**,” claims the architect, who always deploys **orientation devices** – views, openings, corridors – **to make the path of the constantly changing officescape self-guiding and cogent**. Yet Mayne notes that even the typology

and program of the office building proved malleable. “Every office is different,” he says. “I was interested in **abstractly translating the narrow, twisting passage and plazas of Klagenfurt into the building.**”

Together with being congruent with architects’ concerns with motion, the JOURNEY metaphor also fulfils a structural function in that it helps organize spatial descriptions in ARs. Thus, many descriptions follow the various itineraries offered to the buildings’ users, guiding them outside and inside their spaces. What follows is a virtual tour inside the Cathedral of Our Lady of the Angels by Spanish architect Rafael Moneo, initially presented as *a spiritual path*:

- (26) From Temple Street visitors will travel a spiritual path, each step a **transition from the secular to the sacred**, through a lower plaza, up the grand staircase, through the upper plaza and on toward the great 25-ton bronze doors [...]. Proceeding through [them], visitors enter the 200 feet long south ambulatory that runs the length of the cathedral from east to west. Passages between a row of asymmetrical chapels lining the ambulatory allow for framed views of the main sanctuary. Turning right at the end of the ambulatory, past a 17th century Spanish Baroque altarpiece, visitors enter the huge 58,000 square foot Nave with seating for 3,000 people.

Finally, together with helping reviewers reconstruct the prospective dynamics of buildings’ users and organize their commentary, some descriptions using motion language appear to be particularly concerned with capturing and communicating people’s ‘feel’ of built spaces while interacting with and inside them, i.e. points to a more holistic experience. This is clearly illustrated in the following description of the museum Cité de L’Océan et du Surf in Biarritz:

- (27) Holl understands the visceral thrill of communing with the ocean’s rollicking power. Such experiences feed through into the muscular yet **sensuous architecture, which cups and cradles visitors within the concrete wave**. The curved platform also acts as a belvedere rising up to address the site and frame views to the distant western horizon where sea meets sky. **This sense of compression and release is intended to suggest the experience of surfing. ‘It’s analogous to being on a rolling sea,’** says Holl, ‘when you dip down in a valley of water and are spatially enclosed [...] then the sea lifts you up and you can see in every direction.’

This AR presents a building as a *concrete wave*, i.e., visually, and combines this image with information less ‘precise’ which alludes to the sensual, multimodal experience it presumably will provide to its users – initially pointed out by qualifying the museum as “sensuous architecture”. For instance, contrary to expectations, the anatomical term *muscular* does not refer to the way the building is organized or

assembled, but expresses a combination of visual and haptic information, while the verbs *cup* and *cradle* and the nouns *compression* and *release* attempt to capture what people will feel like when inside the museum. These ideas are reinforced by quoting the architect of the building, Steven Holl, who likens such experiences as “being on a rolling sea”.

A final example of contemporary architects’ and reviewers’ enactive – embodied – and, hence, multimodal approach to architectural space is passage (28) which assesses a house designed after the mathematical notion known as the Möbius strip or band, a diagram packed with both visual and abstract implications.

- (28) Based on an angular version of a Möbius strip, [the house’s] *parti* **drives** the conventionally two-dimensional floor plate **into** the third and fourth dimensions: **Looped circulation** that is always **rising** or **falling** erases the distinction between floors, turning them, literally, into a **rotating, revolving continuum of linked space, form, and time**. The Möbius strip implies a continuously evolving surface, and by subsuming all the rooms in the **circulation ribbon**, the architect creates a relational environment of forms and spaces juxtaposed in evolving relationships. [...] **The Möbius circulation starts** at the top of the entrance stair, one flight up from the lowest level, where the main bedroom and one of the studies are located. **The path splits** at this landing with a **corridor that passes** an informal kitchen and a large dining area [...]. **The path continues** to a tall living room of variable height; the ceiling and floor **shift** at the center, splitting the room into low and high ground. **The path doubles back on itself and climbs** a half level to a corridor [...]. This corridor **continues** to a stair that **descends** to the second- floor entrance hall to complete **the circuit**. [...] The **flow** of space is simultaneously **centripetal** and **centrifugal**. A fascinating, counterintuitive diagram characterized by form and circulation reversals, the Möbius strip, as applied to the house, makes **the sequence of spaces** intriguing – impossible to predict and difficult to grasp. [...] **The house engages the senses by inviting promenades that set the parts into kaleidoscopic rotation**. Spaces that are alternately intimate and grand, warm and cold, abstract and tactile, closed and open, **succeed each other** in this time-based concept of a house understood through experience.

Here, the Möbius strip is used for describing the building’s *parti*, i.e., its basic scheme or concept, which is later reformulated as a *ribbon*. Interestingly, the architects’ choice of this geometrical configuration goes beyond its topological properties – for instance, when asked about it, van Berkel stated that “shape has to be informed! Then it is a perfect building. If the shape is only shaped then

it doesn't interest me".⁷ Indeed, the physical continuity of the Möbius strip is a graphic representation of the time-space continuum (as explicitly stated in the text) and befits both the embodied notions of architecture discussed throughout this chapter as well as van Berkel and Bos's architectural agenda. Accordingly, the reviewer's commentary pivots on notions of temporality and motion: he recreates the *circulation routes* in the building, making extensive use of nouns (*path, circuit, promenade*) and verbs (*rise, fall, pass, continue, shift, double, descend, succeed*) evoking the idea of an idiosyncratic JOURNEY metaphor. The adjectives used (*rotating, revolving, evolving, warm, cold or tactile*) point to both the kinetic and tactile, i.e., haptic, experiences afforded by the building, which are reinforced by finally qualifying it as *a piece of environmental braille*. By invoking the – explicit – TOUCH and – implicit – SIGHT elements of the Braille writing system, this expression points to the abstract and sensory complex structures informing the design of this house and is, therefore, an effective descriptor.

These multisensory, holistic portrayals of both built spaces and people's experiences with them problematize the privileged status of sight versus the other sense modalities sustained both within and outside the discipline. Of course, vision plays a catalyst role in architectural design; however, sight is not the only sense or modality involved in the perceptual event exploited in architectural design and communicated in post-construction genres such as ARs. Not only does architecture involve several realms of sensory experience which interact and fuse into each other, but by foregrounding the kinetic dimension of built space, contemporary architects vindicate the critical role of the haptic system in mediating our sensory experience in and with space, vision included: "haptic experiences [the entire body] give fundamental meanings to visual experience, while visual experiences serve to communicate those meanings back to the body" (Bloomer & Moore, 1977, p. 44).

5. Conclusion

My aim in this chapter has been to describe some of the language used by architects to evoke the visual, olfactory, tactile and interactive attributes of built spaces in such a popular genre in architectural discourse as the architectural review. Indeed, contrary to views of architecture as a mainly visual affair, architects claim that their work is much more multimodal, and that vision actually engages the other senses as well. The task of reviewers, then, is to translate the sensory properties of built spaces – their *sensespaces* – through the medium of written language in a form that

7. The interview may be found at <http://www.baunetz.de/talk/crystal/pdf/en/talk19.pdf>

their readers can understand and, presumably, also relate to through their senses. This is an extremely complex and sophisticated task that often requires the use of metaphors and language of diverse sorts. In this regard, the main purpose of this paper has been to explore the ways in which metaphor informs and contributes to the shaping of the sensory landscapes of the community of architects as these are staged in the AR genre.

The engagement of all senses in architects' work and, if this is well done, in people's experience with buildings, reveals some contemporary architects' commitment to buildings as *perceptual landscapes*, and points to a restoration of the long-standing notion of aesthetics at the center of architectural discussion – albeit in renewed form. At the core of all this we find a renewed awareness of the original Greek sense of 'aesthetics' as sensory perception *and* understanding, i.e., sensuous knowledge, as well as a vindication of the haptic system as the dominant modality in our experiencing and communicating three-dimensional space. My aim in this chapter has been to describe the ways in which metaphor mediates this endeavor and, at the same time, foregrounds what might be called a sensuous shift in the architectural realm. For, if as architects claim, experiencing architecture means touching, seeing, hearing, and smelling it, the language used to communicate those experience cannot be but multisensory.

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Creative journeys

Metaphors of metastasis in press popularization articles

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This chapter draws on the notion of creative recontextualization to explore how metastasis is recontextualized through metaphor in a bilingual English-Spanish corpus of press popularization articles on cancer. The quantitative and qualitative analysis revealed marked cross-cultural differences. Thus, while the English subcorpus presents the process with little metaphorical aid, the Spanish subcorpus displays a wider array of images involving movement. Nevertheless, the use of metaphor in both subcorpora generally involved a creative recontextualization of the source domains found in more specialized scientific genres for metastasis (INVASION AND COLONIZATION, DISSEMINATION and MIGRATION) through the 'opening up' of theory-constitutive metaphors. In addition, a particularly creative strategy was the personification of biological entities, which were vilified and portrayed as participating in delinquent activities.

Keywords: metaphor, creative recontextualization, popularization articles, metastasis, cancer

1. Introduction

This chapter deals with the metaphorical expressions related to metastasis in popularization articles in the English and Spanish press. In addition to describing the different metaphors used in both subcorpora, special attention is devoted to the notion of metaphorical creativity (Hidalgo Downing et al., 2013).

The popularization of science involves a recontextualization of knowledge, which has been previously constructed in specialized contexts, and is recreated in another communicative situation for the lay audience (Calsamiglia & van Dijk, 2004). Among the strategies used by journalists to make scientific developments intelligible for lay readers, the use of metaphors constitutes an important tool.

Thus, the genre of popularization articles provides a potentially fertile ground for the exploration of the creative recontextualization of metaphors (Hidalgo Downing et al., 2013). In the context of science popularization, Boyd's (1993) distinction between theory-constitutive and exegetical or pedagogical metaphors is useful because the metaphor systems employed in the specialized literature may also be exploited in popularization articles, either in similar ways or through creative elaboration. Theory-constitutive metaphors are "an irreplaceable part of the linguistic machinery of a scientific theory", whereas exegetical or pedagogical metaphors are used to explain scientific theories which can be rendered in non-metaphorical terms (Boyd, 1993, p. 486). However, studies have shown that, instead of classifying metaphors into categories, it is more appropriate to approach them through the functions they perform (Knudsen, 2003, 2005; Semino, 2008).

In this regard, Knudsen's (2003) notion of the 'closing' and 'opening up' of technical metaphors is particularly useful. When first introduced in scientific contexts, metaphors are marked as alien in the discourse and the correspondences between the source and target domains need to be made explicit. After a given metaphorical model is tested and validated, its metaphoricity fades away and it may be established as a specific concept within a scientific field (i.e. the metaphor is 'closed'). In genetics discourse, for instance, CODE metaphors such as *translation*, *messenger* RNA and *code* have acquired specialized senses as the knowledge in this field has increased. In non-specialized contexts, however, closed metaphors may need to be 're-opened' (i.e. marked as metaphorical and/or elaborated) for the benefit of lay readers lacking sufficient knowledge to interpret the terms or the topic adequately (Knudsen, 2003, pp. 1254–1255).

In the context of popularization, the notion of 'opening-up' of closed metaphors can be accounted for in terms of creative metaphor use. This study follows a discourse-oriented approach for the analysis of metaphorical creativity (Semino, 2008; Hidalgo Downing et al., 2013), since creativity operates at both the conceptual and the linguistic level. In addition to analyzing metaphorical expressions for metastasis drawn from specialized domains, which in popularization articles may be regarded as 'novel' or 'alien', this study examines the discourse patterns observed in the use of metaphor in popularization articles: namely, clustering, extension, mixing and signaling (Semino, 2008, pp. 24–28), as well as intertextual metaphors as viewed by Zinken (2003). These "salient patterns of metaphorical expressions" can be classed as potentially creative and perform a number of functions in the discourse (Semino, 2008, p. 219). This study also considers the cross-cultural differences in the use of metastasis-related metaphors in English and Spanish popularization articles.

The chapter is organized as follows: Section 2 broadly introduces the topic of metastasis and accounts for the metaphorical systems attributed to this process in

scientific domains. Section 3 outlines the corpus and the methodological procedure. Sections 4 to 6 present the results of the analysis and include conventional and novel metaphors for this process, as well as creative patterning of metaphors and their roles in the articles. The chapter is rounded off in Section 7 with the concluding remarks.

2. Metastasis and its metaphors in specialized genres

Metastasis is the growth of a secondary tumor in an organ different from the one first affected. The process is highly complex and is yet to be fully understood. However, it is of crucial importance since metastases are the cause of 90% of the deaths from cancer (Hanahan & Weinberg, 2000). The following excerpt further defines the process and illustrates the wide array of metaphors that may be present in specialized discourse on metastasis.

Sooner or later during the development of most types of human cancer, primary tumor masses spawn pioneer cells that move out, invade adjacent tissues, and thence travel to distant sites where they may succeed in founding new colonies [...]. The capability for invasion and metastasis enables cancer cells to escape the primary tumor mass and colonize new terrain in the body where, at least initially, nutrients and space are not limiting.

(Hanahan & Weinberg, 2000, p. 65, my emphasis)

In the context of metastasis, it is not always easy to delimit the boundary between the literal and metaphorical because cancer cells literally move within the body from one place to another (Semino et al., 2004). However, it could be argued that the expressions *pioneer*, *invade*, *founding*, *colonies*, *invasion*, *colonize* and *terrain* above are metaphors drawn from the domain of INVASION AND COLONIZATION. To my knowledge, van Rijn-van Tongeren's study (1997) is the only systematic analysis of metaphors for metastasis in specialized genres. The author subsumed similar expressions under the conceptual metaphor TUMOR CELLS INVADE AND COLONIZE, which she related to Halsted's (1907) theory of metastasis. According to this theory, metastasis takes place progressively, with cancer cells first spreading to the lymph nodes and then moving on to secondary organs (van Rijn-van Tongeren, 1997, p. 83). It could also be argued that the expression *travel*, drawn from the JOURNEY source domain, is also used metaphorically and that *escape* involves a degree of personification, since it carries the connotation of getting away from an unpleasant situation and a degree of volition may also be involved.

Van Rijn-van Tongeren (1997) also formulated the METASTASES ARE SEEDS SOWN FROM THE PRIMARY TUMOR conceptual metaphor, which she related to

Stephen Paget's (1889) 'seed and soil' hypothesis for metastasis. Paget sought to explain why particular cancers (*seeds*) metastasized (*disseminate*) in some organs (*soil*) but not others, giving rise to secondary cancers (*new plant*). For instance, breast cancer cells tend to metastasize to the lungs and brain. He formulated his model as follows: "Every single cell must be regarded as an organism, alive and capable of development. When a plant goes to seed, its seeds are carried in all directions; but they can only live and grow if they fall on congenial soil" (Paget, 1889, p. 571).

The author provided statistical evidence which suggested that the bones were particularly affected with metastasis in breast cancer patients. Thus, at the end of the article he concluded that metastasis showed a "dependence of the seed upon the soil" (Paget, 1889, p. 573). Paget's proposal remains a hypothesis to date; nevertheless, his model is still driving research into metastasis and remains productive since the metaphorical formulation of his hypothesis allows scientists to make inferences about aspects of the source domain and investigate how they may be mapped onto the target (see for instance Comen, 2012).

Van Rijn-van Tongeren subsumed expressions such as *migrate* and *immigrate* under the INVASION AND COLONIZATION source domain. However, the domain of MIGRATION in its own right is also relevant in the context of metastasis (Pienta & Loberg, 2005). Although the two domains are clearly related since establishing a colony involves the migration of colonizers to the new settlement, a marked difference exists in that colonization arises from greed, but immigration usually from need.

This review of the metaphorical systems used in scientific genres is pertinent because they are also exploited in popularization articles, either in similar ways or through creative elaboration.

3. Materials and methods

The corpus used in this study was originally compiled for a broader investigation of the use of metaphor in cancer popularization articles. It is a bilingual, English-Spanish, corpus consisting of 300 popularization articles on advances in oncology drawn from *The Guardian*, *The Times*, *El País* and *El Mundo*. The articles included in the study dealt explicitly with metastasis and were selected by reading the articles and performing corpus searches for key terms.

Although 62 of the 150 English articles (22 in *The Guardian* and 40 in *The Times*) dealt with the process of metastasis, the term *metastasis* and its derived forms (*metastases*, *metastasize*, *metastatic*) appeared only 10 times in 5 texts in *The Guardian* and 15 times in 7 texts in *The Times*. Instead, the articles referred

to metastasis as the *spread* (21 and 36 texts, respectively) or *movement* (5 and 8 texts, respectively) of cancer cells, or metastases were *secondary cancers* (3 and 5 texts, respectively).

The process featured in 70 Spanish articles (36 in *El País* and 34 in *El Mundo*) and the specialized terms were highly conspicuous, appearing in nearly all of these texts (30 and 29, respectively)(Table 1).

Table 1. Frequency of metastasis and related forms in the Spanish subcorpus

	<i>El País</i>		<i>El Mundo</i>		Combined	
	No. texts	No. instances	No. texts	No. instances	Total texts	Total instances
Metástasis	29	107	27	104	56	211
Metastásico/a	5	6	13	15	18	21
Metastatizar	1	1	2	2	3	3
Micrometástasis	1	1	1	9	2	10

Nevertheless, alternative non-metaphorical expressions also abound in the Spanish texts: e.g. *expansión* ('expansion'), *extender*, *extensión*, *extendido* ('spread'), *propagarse* ('propagate'), *progresión* ('progression'), *desplazarse* ('move').

Once the relevant texts from the corpus were selected, metaphor identification was carried out through a combination of automatic and manual analyses. First, concordance lists were generated to locate metaphorical expressions from the INVASION AND COLONIZATION, DISSEMINATION, MIGRATION and JOURNEY domains. A reading of the articles was then carried out to confirm that all the metaphors of interest for the analysis had been included and to locate novel or creative uses of metaphor and instances of personification. The co-text of the metaphorical candidates was then examined to identify clusters of creative patterning in the discourse.

4. Quantitative and qualitative analysis of metaphors of metastasis

Tables 2 and 3 present the quantitative results for the metastasis-related metaphorical expressions in the English and Spanish subcorpora, respectively, for the source domains used in scientific discourse.

In the English press (Table 2), the metaphor count is rather low, especially in *The Guardian*, where metaphorical expressions for metastasis were only identified in two texts. *The Times* displays a greater variation but, compared with the Spanish subset (Table 3), the number of metaphors is still scarce. Despite the small number, two source domains employed to popularize the process of metastasis have

Table 2. Metaphorical expressions for metastasis in the English subcorpus

Source domain	Metaphorical expressions	<i>The Guardian</i>		<i>The Times</i>		Combined	
		No. texts	No. instances	No. texts	No. instances	Total texts	Total instances
INVASION AND COLONIZATION	<i>invade</i>	0	0	4	5	4	5
	<i>invasive</i>	0	0	2	2	2	2
	<i>foreign invader</i>	1	1	1	1	2	2
	<i>colonize</i>	0	0	2	2	2	2
	<i>colony</i>	0	0	1	1	1	1
MIGRATION	<i>migrate</i>	0	0	3	3	3	3
	<i>migration</i>	1	1	1	1	2	2
JOURNEY	<i>travel</i>	0	0	1	1	1	1
Total			2		16		18

Table 3. Metaphorical expressions for metastasis in the Spanish subcorpus

Source domain	Metaphorical expressions	<i>El País</i>		<i>El Mundo</i>		Combined	
		No. texts	No. instances	No. texts	No. instances	Total texts	Total instances
INVASION AND COLONIZATION	<i>colonizar</i>	4	5	1	2	5	7
	<i>colonias</i>	2	3	0	0	2	3
	<i>colonización</i>	0	0	1	1	1	1
	<i>invadir</i>	9	17	5	8	14	25
	<i>invasión</i>	7	9	4	4	11	13
	<i>invasivo</i>	3	4	4	5	7	9
DISSEMINATION	<i>diseminación</i>	6	14	3	3	9	17
	<i>diseminar(se)</i>	3	4	3	3	6	7
	<i>implantación</i>	0	0	1	1	1	1
JOURNEY	<i>viajar</i>	4	6	6	6	10	12
	<i>viaje</i>	3	4	3	4	6	8
	<i>destino</i>	1	1	1	1	2	2
MIGRATION	<i>migrar</i>	1	1	2	2	3	3
	<i>migración</i>	0	0	2	2	2	2
	<i>emigrar</i>	2	2	1	1	3	3
	<i>anidar</i>	3	4	2	3	5	7
	<i>nidificación</i>	1	1	0	0	1	1
Total			75		46		121

been identified – INVASION AND COLONIZATION and MIGRATION together with one instance of the JOURNEY domain. The Spanish subcorpus, however, includes expressions from all four metaphorical systems used in specialized discourse, of which the INVASION AND COLONIZATION and DISSEMINATION source domains are the most prominent.

4.1 INVASION AND COLONIZATION metaphors

With 12 metaphorical expressions, INVASION AND COLONIZATION is the most recurrent metaphorical system used for metastasis in the English subcorpus taken as a whole, and is realized by fairly conventional linguistic metaphors, which are also typical of scientific genres: *invade*, *invasive*, *foreign invader*, *colonize* and *colony*. Surprisingly, only one realization (*foreign invader*) of this source domain was found in *The Guardian*, although this metaphorical theme would have been familiar given Britain's long history of colonialism. However, journalists working at *The Guardian*, whose left-oriented editorial line tends to be more critical of the subject of Empire, might consider this metaphor as inappropriate since it may be offensive to the newspaper's increasingly multicultural readership. Support for a general tendency to avoid the topic comes from Crystal and Russ (2010, p. 34), who, in their humorous – often sarcastic – book *Sorry, I'm British*, argue that “the word ‘colony’, even prefixed by the word ‘former’ is only ever heard in a historical context”.

The adjective *invasive* occurred in two texts to convey the potential of the tumor or cancer cells to metastasize and in both instances the metaphorical expression appeared in a direct quote:

- (1) “The other 20 per cent have a more invasive tumor that also requires hormone treatment and chemotherapy. The problem is that we don't know who has which.” (ti09)
- (2) Dr Goding said: “These invasive cancer cells develop in response to conditions inside the tumor. Once they have spread to other areas of the body, their new *environment* determines whether they remain dormant or whether they start dividing again to form new tumors.” (ti41)

In (ti09) *invasive* appeared together with metaphorical *colonize*, non-metaphorical *spread* and the technical term metastasize. In text (ti41), *invasive* was the only metaphorically used word for metastasis while *spread* and *move* were employed non-metaphorically to refer to the process. The combination of the expressions *environment* and *dormant* may be evoking the notion of dormant seeds prevented from germinating by unfavorable conditions for growth. However, in the absence

of a more explicit reference to plants, the presence of these two expressions alone is not enough to trigger a PLANT scenario. Thus, in these examples it could be argued that the metastasis-related metaphors are ‘partially opened’ through the use of non-metaphorical language.

The verb form *invade* could appear in combination with other more creative images, as in (3), where the journalist explains the four stages of colorectal cancer and the corresponding expectation of survival:

- (3) If the cancer has breached the bowel wall, but there is no spread to the lymphatic glands, 80 per cent of patients will have no further trouble. If the cancer cells have invaded the nearby lymph nodes (glands), 60 per cent of patients will survive. If the cells have reached the more distant lymphatic glands, 30 per cent will have a good outlook. If the cancer has travelled to a more distant site, less than 5 per cent have an encouraging prognosis. (ti22)

The four stages mentioned are defined in terms of movement expressions, most of which are metaphorical. The initial stage is described as the escaping from a bounded space (*breached* the bowel *wall*), the second stage is portrayed as the illegitimate occupation of an area (*invaded*), the third stage is expressed non-metaphorically through the expression *reached*. In the final stage, the cancer is said to have *travelled*, the only JOURNEY metaphor in the English subcorpus. The use of this last expression, which is more generic and less violent than the notion of *invasion*, somehow tones down the bleak prognosis or, at least, it is not further dramatized. In contrast to the limited metaphorical use in (1) and (2), this fragment describes the different stages of metastasis more vividly through the combination of expressions representing different movement types.

Metaphorical expressions related to the notion of *colonization* are also scarce with only two instances of *colonize* and one of *colony*, which is singled out by means of scare quotes. All three instances were found in *The Times*:

- (4) Using a new kind of imaging system, scientists will for the first time be able to watch how cancer cells grow, move, enter and leave blood vessels and colonize distant sites. (ti50)
- (5) Writing in the American journal *Cancer Research*, they say that although only 0.1 per cent of the cells they took from prostate tumors were cancer stem cells, this small number had been able to direct other, lesser cells to develop into “colonies” of tumors four times their own number. (ti30)

In (4) only non-metaphorical expressions related to movement occurred in the immediate co-text (*move*, *enter* and *leave*).

In the Spanish subcorpus, the INVASION AND COLONIZATION source domain is the most recurrent metaphorical system, especially in *El País*. As in the English

subcorpus, the only instance explicitly signaled as a metaphor by means of scare quotes is *colonia* ('colony'), which appears twice in a text from *El País*.

(6) Nuevas 'colonias'

[...] Esta estimulación hace a las células madre producir una sustancia, las citoquinas CCL5, que a su vez ayudan a las células del cáncer de mama a moverse por los vasos sanguíneos y encontrar nuevos lugares donde establecer 'colonias'. (ep53)

'New 'colonies'

[...] This stimulation makes stem cells produce a substance, the CCL5 cytokines, which in turn help breast cancer cells to move through the blood vessels and to find new sites to establish 'colonies'.

INVASION AND COLONIZATION metaphors in the Spanish subcorpus are dealt with in more detail in Section 6.2.

4.2 DISSEMINATION metaphors

DISSEMINATION metaphors were only found in the Spanish subcorpus and all are fairly conventional, with *diseminación* ('dissemination') and *diseminar* ('disseminate') being the most predominant. These expressions are, therefore, not singled out by means of scare quotes. However, one isolated example related to this domain – *implantación* ('implantation') – stands out in the corpus as it is less conventional:

- (7) “Estos genes no sólo permiten el crecimiento del tumor primario”, explica Nadal a elmundo.es, “sino que facilitan la implantación de las células malignas en el pulmón”. (em29)
- “These genes not only allow the growth of the primary tumor”, explains Nadal to elmundo.es, “but also facilitate the implantation of the malignant cells in the lung”.

In (7) genes are said to facilitate the *implantación* ('implantation') of malignant cells in the lungs. The underlying image is not so much cells as *seeds* but cancer as a *plant* from which a scion is taken and transplanted in another environment (organ) where it grows. Thus, the scientist, in his briefing of journalists in a kind of press release, adapts Paget's 'seed and soil' model in a deliberate and partially creative manner (Semino et al., 2013, p. 43), which the journalist has then adopted in the popularized account for the general public.

4.3 MIGRATION metaphors

In the English subcorpus, this domain was realized by the conventional expressions of cell *migration* and the verb form *migrate*.

- (8) Way said: “Our findings represent a new way to regulate a key family of proteins involved in cell crawling that will change the way researchers see current models of cell migration – an important aspect of the spread of cancer.” (gu53)

Example (8) also contains the more technical expression of cell *crawling*, which describes a specific type of cell motion. Given that the topic of the whole article is metastasis, the absence of other metaphorical expressions to explain the process – apart from these two in the quote of a scientist – is somewhat striking.

- (9) The team [...] took cancer cells from a patient with an aggressive and metastatic breast tumor and transplanted them into mice. They then selected the cells that migrated to the animals’ lungs, and screened them for genetic changes. (ti28)
- (10) Twenty tumors [...] changed from oestrogen receptor (ER) negative to ER positive when they migrated to the lymph nodes. This means that hormone therapies such as tamoxifen, which would not have worked for the original tumor, could help treat the disease if it spread in its ER positive form. (ti70)

In contrast to other metaphorical expressions, which may be seen as more alien in the context of cancer and hence may require the use of ostensive signaling and definitions, the notion of *migration* is conventional and largely self-explanatory, as shown in Examples (8)–(10). Although in its basic sense migration is attributed to people or animals, in everyday speech it can be found in other contexts such as computing. It is for this reason that the term requires no scare quotes and minimal explanation.

The Spanish subcorpus exhibited greater variation within the MIGRATION domain. Metaphors have been identified to conceptualize the general process as *migración* (‘migration’), the movement of cancer cells as *migrar* (‘migrate’) and *emigrar* (‘emigrate’), and the process of settling in a new organ as *anidar* (‘nest’) and *nidificación* (‘nidification’ or ‘nest-building’).

- (11) Massagué reconoce «la dificultad de aislar células de metástasis en el cerebro». Para solventar este obstáculo, su equipo inyectó en varios ratones células metastásicas de origen humano. El estudio de esas células, que emigraron a distintas regiones del organismo de los roedores, reveló diferencias genéticas significativas entre ellas. (em62)

‘Massagué recognises “the difficulty in isolating metastatic cells in the brain”. To overcome this obstacle, his team injected several mice with metastatic cells of human origin. The study of these cells, which ‘emigrated’ to different regions in the rodents’ organism, revealed significant genetic differences between them.’

In (11) the expression *emigraron* (‘emigrated’) reinforces a metaphorical reading of *regiones* (‘regions’), which is a conventional and ‘closed’ technical metaphor to refer to different body parts in anatomy.

The expression *anidar* (‘nest’) appeared 7 times in the corpus and was signaled once as metaphorical, and the abstract and possibly more technical variant *nidificación* (‘nidification’) occurred once:

- (12) Las metástasis son la principal causa de muerte en los pacientes con cáncer. Se trata de un proceso que comienza cuando las células tumorales abandonan su localización primaria para desplazarse hasta otros órganos en los que son capaces de anidar. (em40)
 ‘Metastases are the main cause of death in cancer patients. Metastasis consists of a process which begins when tumor cells leave their primary location and move towards other organs where they are able to nest.’

These nesting expressions suggest the conceptualization of cancer cells as migrating birds and can be seen as ‘bird’ equivalents to *colonize* and *implantation* with reference to human and plant behavior, since they refer to the establishment of cancer cells at a secondary site. No similar expressions were present in the English press, but the use of “nests of cells” is frequent in histopathological descriptions in scientific articles: e.g., “Invasive carcinoma commonly presents a picture of nests of neoplastic cells in a matrix of connective tissue” (Leighton et al., 1960, p. 575). The specificity of the source contexts of these expressions may not lend itself to their adoption in popularizations.

As with expressions from the DISSEMINATION metaphorical system, the MIGRATION source domain has the advantage of not being violent (see Williams Camus, 2009). However, outside the context of metastasis, this theme does not seem to be transferable to cancer in general.

4.4 JOURNEY metaphors

Whereas the English subcorpus only included one instantiation of the JOURNEY source domain (example 3), the Spanish subcorpus exhibited a greater number and more variety with *viaje* (‘journey’) and *viajar* (‘travel’) and *destino* (‘destination’). It appears that journalists resort to this image in accounting for metastasis. They tended to occur in the lead (8 of 15 texts), and often combined with other

metaphorical expressions from the INVASION AND COLONIZATION, and DISSEMINATION source domains.

In four texts from *El Mundo*, the expressions *viaje* and *viajar* were highlighted from the rest of the text by means of scare quotes, as in (13):

- (13) Son ya varias las compañías farmacéuticas que están investigando posibles compuestos capaces de bloquear TGFb para interrumpir este ‘viaje’. (em42)
 ‘There are several pharmaceutical companies investigating possible compounds capable of blocking TGFb in order to interrupt this ‘journey’.

5. Personification

The manual analysis revealed that personification plays a role in the reporting of metastasis-related advances, especially in the Spanish press. In the English subcorpus, three expressions (*marauder*, *rampaging* and *rogue*) could be said to personify cancer cells:

- (14) WHAT MAKES a cancer spread? What turns a treatable tumor into a *marauder*, *rampaging* through the body to *invade* other organs? Neuroscientists at Imperial College London think that they have the answer – and it is causing a stir among oncologists. (ti27)
- (15) Cancers are all caused by genetic mutations that promote unchecked cell division, and they kill when this *rogue* tissue *invades* vital organs. (ti53)

In examples (14) and (15) these expressions appear in close proximity to *invasion* metaphors. Although the instances in which cells are said to *invade* other organs have been subsumed under the INVASION AND COLONIZATION domain, it should be noted that this notion also involves a degree of personification. This is more evident in (14) and (15) where cancer cells are portrayed as deviant characters who are ‘up to no good’ in the body by depicting cancer cells (tumors and cancerous tissue) as ‘outlaws’ who disrupt the social order within the body by breaking biological laws. According to Edwards (2003, pp. 104–106) the conception of cancer cells as displaying deviant behavior is stressed by contemporary theories of cancer. In (14) the metaphorical cluster is located in the lead of the article: thus, it could be argued that combining these metaphorical expressions within the rhetorical question is a strategy to introduce the topic to readers in an engaging way.

Cancer cells are also personified through the expression *foreign invaders*. In the contexts where these expressions appear, there is a minimal elaboration of the metaphorical theme through the presence of other war and violence metaphors:

- (16) Helper T-cells are specialized white blood cells that identify *foreign invaders*, or cancerous cells, and *marshal* other elements of the immune system against them. (ti55)
- (17) If the cells did *cross* the placental *barrier*, the child's immune system should have recognized them as *foreign invaders* and *destroyed* them. (gu73)

In both examples the expression appears in relation to the immune system, and the journalist describes its reaction against cancer cells in violent terms.

In contrast to the English subcorpus, the Spanish articles often explain metastasis by delving deep into the particular biological interactions occurring within cancer cells or between cancer cells and other molecules in their environment. This frequently involves the exploitation of metaphorical expressions that personify cancer cells and other biological entities (genes, proteins).

Examples (18) and (19) both report on the identification of a gene (SATB1), which appears to play an important role in the development of the metastatic ability of breast cancer by coordinating more than 1,000 breast cancer genes. Both articles criminalize the gene. In (18) it is said to be a *mafioso* gene in the headline and a *mafia chief* in the lead:

- (18) Un gen 'mafioso' controla al menos otros 1.000 genes en el cáncer de mama
Un solo gen actúa como un jefe mafioso y controla el comportamiento
de al menos otros 1.000 genes en las células de los tumores de mama más
agresivos, han descubierto investigadores estadounidenses. (ep60)
'A 'mafioso' gene controls at least another 1,000 genes in breast cancer.
A single gene acts like a mafia chief and controls the behavior of at least
another 1,000 genes in the cells of the most aggressive breast tumors,
American researchers have discovered.'

Similarly, in (19) the gene is portrayed as the *crime boss* in the headline and as a *pernicious leader* in the body of the text:

- (19) El jefe del crimen se llama SATB1
[...] El equipo de Kohwi-Shigematsu ha demostrado que es posible
desactivar a este 'líder' pernicioso para frenar la proliferación de las células
cancerosas e incluso devolverles su apariencia normal. (em40)
'The crime boss is called SATB1
[...] Kohwi-Shigematsu's team have shown that this pernicious 'leader' can
be stopped to bring the proliferation of cancer cells to a halt and even to
restore their normal appearance.'

However, neither of the articles develops the crime scenario. Thus, these expressions (particularly, those appearing in the headlines and the lead) seem to be

used as attention-grabbing devices. In addition, they help to establish a frame of reference for the readers to understand that the interactions within the body are governed by a hierarchical organization and that this gene is acting to the detriment of the organism.

In (20) it is the tumor cells that are portrayed as participating in delinquent activities:

- (20) La labor del equipo de Massagué se centra en identificar el conjunto de genes, y ahora también microARN, que las células de un tumor piratean para desarrollar metástasis. (ep58)
 ‘The work of Massagué’s team is focused on identifying the set of genes, and now also microRNA, of which the tumor cells make pirate copies in order to develop metastases.’

This example is from an article reporting on a study investigating the role of microRNAs (molecules) in metastasis. Tumor cells are criminalized and said to make *pirate copies* of the microRNA molecules, an image that evokes the illegally recorded songs and films that are spread via the Internet (body) and by other means, in competition with the authentic products (normal microRNAs).

This article is complemented by a short text in which the journalist introduces the views of another Spanish scientist, Antonio Giráldez, who also studies microRNA molecules. The subhead to this text reads: *Un programa pirateado* (‘A cracked program’). In a direct quotation from the researcher, this metaphorical theme is developed and cancer cells are criminalized as *crackers* and said to *crack into* the cellular *program* in order to use it for their own benefit, that is, to *colonize* other tissues and expand. Thus, the journalist appears to have taken the computer metaphor from the interview with Giráldez and expanded it to explain Massagué’s discovery:

- (21) Un programa pirateado [...] ‘Es posible imaginar que la principal función para los microRNA asociados con metástasis no es controlar la metástasis en sí, sino controlar el movimiento de las células durante el desarrollo. Las células cancerosas se aprovechan de este programa celular y lo piratean para usarlo en su propio beneficio, en este caso colonizar otros tejidos y expandirse’. (ep58)
 ‘A cracked program [...] ‘It is conceivable that the main function of the microRNAs associated with metastasis is not to control metastasis itself but to control cell movement in its development. The cancer cells take advantage of this cell program and crack into it to use it for their own benefit, in this case to colonise other tissues and spread.’

The idea of biological entities being illicitly modified by cancer cells is also present in a group of four articles reporting on the same discovery. In these texts, however, cancer cells are said to alter the moral code of a group of molecules. The discovery involved the description of the role of cytokines in the spread of breast cancer to the lungs. These molecules normally constrain cell proliferation by controlling growth or inducing cell death (apoptosis), but paradoxically, they can also spur metastasis if cancer cells acquire resistance to their signals.

Three of the texts base their argument on the notion that cytokines are *pervers-tidas* ('perverted') by cancer cells:

- (22) Los científicos han identificado el proceso mediante el cual las células de este tumor se reproducen y se extienden al pulmón, "pervirtiendo" una hormona cuya función básica es impedir la división celular. El estudio [...] determina cómo las células utilizan esta molécula [...] en beneficio propio para que actúen a favor del tumor. (ep62)

'Scientists have identified the process by which cells from this tumor reproduce and spread to the lung, by "perverting" a hormone whose basic function is to prevent cell division. The study [...] determines how the cells use this molecule [...] for their own benefit so that they act in the tumor's favor.'

- (23) Se trata de TGF-beta [...], una citoquina que [...], regula el crecimiento y el movimiento celular [...]. En condiciones normales, esta hormona debería frenar el proceso tumoral; sin embargo, todo indica que las células malignas son capaces de 'pervertirla' y utilizarla en su propio beneficio para causar las metástasis. (em42)

'It is TGF-beta [...], a cytokine which [...] regulates cell growth and movement [...]. In normal conditions, this hormone should stop the tumoral process; however, everything indicates that malignant cells are able to 'pervert' it and use it for their own benefit to cause metastasis.'

The metaphorical quality of the expression is signaled by means of scare quotes in three instances in two texts but not in another. This text includes an additional metaphor that TGFb becomes an *ally* of cancer, thus evoking a war scenario in which subversion might be more appropriate than perversion. The fourth text does not include the allusion to perversion but indicates that the tumor cells *apropriate* the cytokine to work for them instead of against them. It should be noted that Spanish *apropiarse* has the negative connotation of taking possession of, or taking over, something in an illegal or abusive manner.

The examples commented on in this section illustrate how in the reporting of metastasis the biological entities which somehow participate in the process are vilified, particularly in the Spanish press. The criminalization of the agents

involved in metastasis can be seen as a strategy to introduce readers to the internal micro level processes in an amusing way while serving to explain more abstract issues involved in the spread of the disease.

6. Creative exploitation of metastasis metaphors

6.1 Intertextual metaphors in the English subcorpus

In (ti08) the journalist reports on a scientific discovery concerning metastasis in an original way by drawing on the popular fairy tale *The Pied Piper of Hamelin*. As the story is culturally grounded, this can be seen as an example of intertextual metaphor through allusion to a culturally salient text (Zinken, 2003, p. 509).

Sample text 1. ‘Pied Piper’ clue to cancer spread (ti08)

‘Pied Piper’ clue to cancer spread

THE spread of cancer around the body is guided by a protein that acts like the Pied Piper attracting the rats of Hamelin, scientists have found.

The discovery could make it possible to halt the spread by silencing signals sent by the protein. That would make cancer treatment much simpler. At present, once the illness has spread to several organs it is usually impossible to stop.

Researchers at the Breakthrough Breast Cancer Toby Robins Research Centre in London found that breast cancer cells follow a protein called uPA that helps them to migrate around the body.

When the action of this protein was blocked with antibodies, the cells stopped moving. It is hoped that the discovery will lead to ways of halting the spread of breast cancer.

The research, reported today in the Journal of Cell Biology, showed that breast cancer cells producing a protein called Endo180 were attracted to uPA. If either protein was missing the cells no longer moved.

The scientists tried blocking the action of uPA using antibodies that latched on to Endo180 -the equivalent of blocking out the piper’s tune by fitting the rats with ear plugs. They found that this stopped the cells being drawn to the uPA protein.

Clare Isacke, who led the study, said: “We now know that Endo180 antibodies have the potential to stop the spread of certain breast cancer cells.”

The article’s headline introduces the metaphorical scenario to be developed in the rest of the text: “Pied Piper” clue to cancer spread. The lead summarizes the research by elaborating the metaphorical association presented in the headline. Parallels are established between the uPA protein and the Pied Piper, on the one hand, and breast cancer cells and the rats of Hamelin, on the other.

The second paragraph explains that the progression of cancer could be halted by *silencing* the *signals* emitted by the protein. The *silencing* metaphorical expression is often used in scientific literature with reference to genes (Williams

Camus, 2015). Essentially, genes produce proteins, and a technical metaphor often used to convey this is that of genes *expressing* a protein; if they cease to do this because the chemical reaction is blocked, they are *silenced*. However, here the trait of the gene is transferred to the protein in some kind of metonymic relation. This may be because the protein, or Pied Piper, is the relevant participant and in order to maintain the coherence with the scenario introduced in the headline and lead, the signal (the Pied Piper's tune) needs to be silenced in order to stop the movement of the cells.

The metaphorical scenario is further developed near the end of the article where the journalist explains how the scientists managed to stop the action of this protein. Essentially, the movement of cancer cells took place by the interaction between uPA and another protein produced at the cells' surface, Endo180. This interaction was inhibited with the use of antibodies which *latched* on to Endo180. In order to elucidate this process in an entertaining way, the journalist draws on the Pied Piper's story and creatively modifies the plot. In the explanation, Endo180 is the equivalent of the rats' (breast cancer cells) *ears*, and the antibodies are likened to *plugs* which are *fitted* into them. As a result, breast cancer cells no longer 'hear' the *signals* emitted in the Pied Piper's tune. Table 4 provides a summary of the correlations that are established between the biological entities and the scientific notions on the one hand, and the adapted fairy tale on the other.

Table 4. Source to target domain correspondences for *Pied Piper* intertextual metaphor

	Target domain	Source Domain
Biological entities	uPA molecule	Pied Piper
	breast cancer cells	rats
	Endo180 (protein)	rats' ears
	antibodies	earplugs
Actions	to spread	to migrate
	silencing (block chemical reaction)	silencing (block Piper's tune)
	latch	fitting (earplugs)

Thus, in this text, the popular fairy tale of *The Pied Piper of Hamelin* is creatively exploited and adapted to account for the scientific discovery in an entertaining and accessible way to the readers.

The fact that this story was also reported under the "Pied Piper" heading in the *Daily Mail* and the *Evening Standard* suggests that the cultural reference originated in the scientist's account to the press. However, in the other stories, the journalists limited themselves to the *silencing* metaphor without further elaboration on the means, which the *Times* report allows by equating the antibodies

to earplugs, thereby enhancing the explanatory function of the metaphor and conferring on it a structural role in the management of the discourse (Cameron & Stelma, 2004, p. 113).

6.2 Creative patterning in the Spanish subcorpus

6.2.1 *Metaphorical clusters in the reporting of metastasis*

In contrast to their relatively sparse presence in the English subcorpus, metaphorically used words to recontextualize metastasis abound in the Spanish subsection. Although these expressions have been presented separately for the sake of clarity, in the data they manifest themselves in combination.

Take Example (24), which is the opening of an article:

- (24) La lucha contra la metástasis, la diseminación del cáncer a otros órganos diferentes del originalmente afectado, se ha convertido en el frente de investigación oncológica más activo. Los intrincados mecanismos celulares se interrogan en detalle para ver cómo se puede frenar el peligroso viaje de las células cancerosas por el torrente sanguíneo para colonizar otros lugares del cuerpo. (ep70)
- ‘The fight against metastasis, the dissemination of cancer to organs other than the one originally affected, has become the most active cancer research front. The intricate cell mechanisms are subjected to detailed interrogation to see how to put a brake on the dangerous journey of cancer cells through the bloodstream to colonize other sites in the body.’

In (24), the particularly high metaphorical density to introduce the topic of the article, may have a twofold purpose: to present metastasis in an entertaining way and to provide general information about the process. Research into metastasis is framed as a specific *front* in the *fight* against cancer. This research consists of a detailed *interrogation* of the intricate cellular *mechanisms* in the organism. This questioning of biological processes evokes a crime scenario of police investigation. In addition, metastasis is first defined as *dissemination* and then as a dangerous *journey* to *colonize* different parts of the body. Thus, this text combines three of the four source domains presented earlier. However, these expressions seem largely compatible. Firstly, they all involve an underlying PATH schema. Moreover, the combination of images to explain the same phenomenon is not rare in popularization articles and science (Williams Camus, 2009, 2015; Hidalgo Downing, 2015, pp. 115–116).

Example (25) illustrates how the various stages of malignant progression are conveyed by means of metaphorical language and provides detail about the different phases:

- (25) “Las metástasis son vistas a menudo como el paso final de la progresión del tumor”, explicó Weinberg, un proceso complejo que exige que las células tumorales se vuelvan invasivas, vian por el sistema linfático y los vasos sanguíneos a órganos distantes, generen micrometástasis y finalmente se reproduzcan y se ‘asienten’ en el nuevo destino, colonizándolo. (ep53)
- “Metastases are often seen as the final step in tumor progression,” explained Weinberg, it is a complex process that requires tumor cells to become invasive, to travel through the lymphatic system and blood vessels to distant organs, to generate micrometastases and finally to reproduce and ‘settle’ in their new destination colonizing it.”

In (25) the different stages towards the formation of a secondary cancer are described metaphorically. First, cancer cells need to become *invasive* (i.e. spread to adjacent tissue). Second, they *travel* through the lymphatics and blood vessels, and finally, they *settle down* and *colonize* the new *destination*. It should also be noted that the two domains present, *INVASION AND COLONIZATION* and *JOURNEY*, are elaborated through related metaphorical expressions to account for the complex process of metastasis: *invasivas, asienten, colonizar, viajar, destino*.

In addition to forming clusters, the same metaphors or other related terms may also appear at different points of the texts, thus providing the text with lexical coherence. Text (26) is an extended example from *El Mundo* illustrating how the different metaphorical themes are combined and used throughout the text together with other expressions involving personification in general.

- (26) El científico Joan Massagué pone al día de las bases moleculares por las que el cáncer se disemina a otros órganos.
- Es lo peor del cáncer. Si el crecimiento de los tumores malignos se circunscribiera únicamente a su lugar de origen, la letalidad de esta patología sería posiblemente mucho menor de la que tiene ahora. Sin embargo, las células cancerosas se escapan del tumor primitivo para colonizar otros órganos a distancia y acabar con el paso del tiempo con la vida de los pacientes oncológicos.
- El español Joan Massagué [...] es uno de líderes en la comunidad científica en la búsqueda de genes responsables de que las células cancerosas vian desde donde se han iniciado al pulmón, el hígado, los huesos o el cerebro, que son los lugares en los que colonizan de forma más frecuente. Al final, este tipo de asalto es, en general, la máxima razón de la mortalidad de la enfermedad maligna [...].
- Según estos investigadores ya hay decenas de genes que toman parte activa en los tres estadios básicos en los que se puede resumir el proceso metastásico. El primero es el de la iniciación de la colonización desde el tumor primitivo, el segundo es el de la progresión de las células malignas

hasta lugares distantes y el tercero el de la virulencia de estas células una vez que han alcanzado el objetivo. (em55)

‘The scientist Joan Massagué gives an update on the molecular basis whereby cancer is disseminated to other organs.

It is the worst part of cancer. If the growth of malignant tumors were restricted to their place of origin, this disease would possibly be far less lethal than it is now. However, cancer cells escape from the primary tumor to colonize other distant organs and in time to put an end to cancer patients’ lives.

The Spaniard Joan Massagué [...] is one of the leaders in the scientific community in the search for the genes responsible for cancer cells traveling from where they originated to the lung, liver, bones or brain, which are the sites most often colonized. In the end, this kind of assault is, in general, the main reason for the mortality of this malignant disease [...].

According to these researchers there are dozens of genes which take an active role in the three basic stages into which the metastatic process can be summarized. The first is the initiation of colonization from the primary tumor, the second is the progression of malignant cells to distant sites and the third is the virulence of these cells once they have reached their target.’

In (26), although the most recurrent notion is that of *colonization*, other metaphorical expressions are present. The process itself, as seen in Example (24), is first introduced in the subheadline as a *dissemination*. In the lead, cancer cells are portrayed as if they were volitional agents: they *escape* from their original location with an aim in mind: to *colonize* distant organs. The lead researcher is said to be looking for the genes *responsible* for cancer cells *traveling* to four organs which are frequently *colonized*. The whole process is then summarized as an *assault*. This unconventional metaphorical expression can be seen as an elaboration on the topic of *colonization*, implying that it is not a peaceful occupation of virgin territory.

The reference article, signed by Chiang and Massagué, is a review article that appeared in the *New England Journal of Medicine* (Chiang and Massagué, 2008). The purpose of review articles is to identify relevant literature and summarize the current state of understanding on a topic for busy researchers who are spared the effort of searching databases themselves. This expert-to-expert context of situation differs from that of the popularization in which the writer presents and explains the content to an educated lay public. In this case, the recontextualization is twofold in that the original review is in English and the press article in Spanish. The Spanish writer, Victor Córdoba, has drawn on the metaphors in the review, where the conventional *colonize* (7 times) are *disseminate* (6) are both prominent. In contrast, *escape* and *travel* have been simplified from the more elegant “*traverse the boundaries of the tumor*” and “*sojourn to a distant site*”, the “*destination*”.

Finally, the *assault* and its associated mortality, bringing the patient's life to an end are adaptations of the Spanish journalist to underline the relevance of the topic for readers, who could be affected by the disease. The source text refers only to "death" and the "aggressive edge" of genes involved in metastatic virulence in the third stage.

In the recontextualization process, the adoption and adaptation of the metaphors from the source review article occur mainly on the interpersonal dimension (tenor) and reflect the change of audience, since the content (field), albeit simplified, remains essentially constant as does the written mode of communication (see Semino et al., 2013, p. 43). Nevertheless, the simplification, the personification and personalization of some metaphors is a result of the journalist's efforts to reach his audience.

This section has shown how metaphorical expressions from the four source domains introduced earlier are combined in the Spanish subcorpus to explain metastasis, often appearing in close proximity, and thus forming clusters, but also stretching through the texts. Although there is a general ethos that metaphors should not be mixed, it has been shown how in actual texts metaphorical expressions from different source domains are combined without placing excessive processing pressure on the reader or disrupting the coherence of the text (Kimmel, 2010; Gibbs, 2016). In addition, although the domains under discussion involve different scenarios, they all share an underlying PATH schema and can, therefore, be considered consistent at a cognitive level.

6.2.2 *Creative elaboration and extension in the Spanish press*

The quantitative analysis has shown that most of the metaphors used in the Spanish press are similar to those in scientific genres. However, in some texts more creative expressions from the above-mentioned domains are employed, thus elaborating and extending the technical concepts. They can, therefore, be seen as instantiations of what Knudsen (2003) refers to as the 'opening up' of technical metaphors.

Some of the linguistic metaphors in Example (27) could be related to the INVASION AND COLONIZATION domain. It should be noted, however, that the more conventional expressions in this metaphorical system (*invade* and *colonize*, and their derivatives) are not present in the text. Rather, the INVASION AND COLONIZATION scenario is evoked by other novel expressions in the lead and in the third paragraph to bring the abstract notion of metastasis closer to the reader by presenting it in an attractive narrative form.

- (27) Como si fuesen exploradores que se lanzan a reconocer el terreno de 'avanzadilla', los tumores liberan pequeñas membranas capaces de alterar el tejido que los rodea para facilitar la propagación del cáncer [...]

Estas microvesículas (denominadas exosomas) se asemejan a pequeños sacos que se desprenden del tumor y van cargados de algunas sustancias. Entre ellas, ciertas proteínas angiogénicas y moléculas que le permiten ir 'allanando el terreno' en los tejidos circundantes para facilitar la expansión de las células sanguíneas. Es decir, manipulan el entorno para favorecer el crecimiento del tumor, burlando la vigilancia del sistema inmune. (em54)

'As if they were scouts sent out in an advance party to reconnoitre the land, tumors release small membranes capable of altering the tissue surrounding them to facilitate propagation of the cancer [...]

These microvesicles (called exosomes) resemble small bags which become detached from the tumors and are laden with substances. These substances include certain angiogenic proteins and molecules that allow the 'leveling out of the ground' in the surrounding tissues so as to facilitate the spread of blood cells. That is, they manipulate the environment to favor tumor growth, outsmarting immune system surveillance.'

The vesicles released by the tumors are said to be *scouts* which, at the onset of the metastatic process, set out on a *reconnaissance mission* to explore the unknown territory, which is supposedly hostile and ready to defend itself. However, since the INVASION AND COLONIZATION theme is evoked indirectly, the overall effect is less aggressive than an outright WAR scenario. Examination of the source for this popularized account revealed that the only cues for the creative scenario were that glioblastoma cells were able to "mold their stromal environment to their advantage", "alter surrounding normal cells" and "communicate" between themselves via the microvesicles (Skog et al., 2008).

In contrast, in (28) the INVASION AND COLONIZATION scenario is more clearly exploited. The article reports on a case study in which the scientists used the patient's own immune system to treat his cancer:

- (28) Los CD4 [linfocitos] han resultado tener más funciones contra el invasor tumoral de lo que se creía en un primer momento y el caso recogido en el *NEJM* representa uno de los colofones de esta andadura.
- Sin embargo, a pesar de los avances realizados en el conocimiento de las estrategias 'bélicas' que emplea el tumor para ganar terreno y el organismo para erradicarlo, desarrollar el arma definitiva que acabe con el cáncer no es sencillo. (em46)
- 'CD4 cells [lymphocytes] have proved to have more functions against the tumor invader than was first thought and the case reported in the *NEJM* represents one of the high points along this path.
- However, in spite of the advances in the understanding of the 'war' strategies employed by the tumor to gain ground and by the organism to eradicate it, developing the ultimate weapon to finish off cancer is not a simple matter.'

In this fragment, the process of metastasis is expressed in highly metaphorical language in a cluster in which tumors are depicted as *invaders* using *warlike strategies* to *gain ground* on the organism. Although the use of scare quotes minimizes the WAR scenario and the *defense* is portrayed as against an *invasion* of the body through the euphemistic verb *eradicate*, the framework is essentially one of violent confrontation and thus, may be upsetting for some patients (see Williams Camus, 2009).

In (29) Paget's 'seed and soil' hypothesis, which is alluded to in the source article, is spelt out to provide background information for the correct understanding of the reported scientific achievement:

- (29) Hasta ahora se suponía que los órganos y tejidos participaban de alguna manera en la propensión de ciertos tipos de cáncer a metastatizar. Además, los investigadores sospechaban que los huesos ofrecían un terreno especialmente 'abonado' para las células malignas, probablemente mediante la producción de ciertas moléculas que permiten a las células tumorales 'albergar' en ellos y generar metástasis, una de las complicaciones más frecuentes y mortíferas de muchos tipos de cáncer.
- En este caso, los estudios con ratones que padecían cáncer de piel han permitido observar el papel crucial de una proteína denominada RANKL, que se produce en elevadas cantidades en la médula ósea. "Se trata de una molécula que atrae a las células cancerosas hacia los huesos". (em18)
- 'Until now, it was assumed that organs and tissues somehow participated in the propensity of certain types of cancers to metastasize. In addition, researchers suspected that bones offered a specially 'fertilised' soil for malignant cells, probably by producing certain molecules that allow tumor cells to 'lodge' in them and generate a metastasis, one of the most frequent and lethal complications of many types of cancers.
- In this case, studies in mice that suffer skin cancer have revealed the crucial role of a protein called RANKL, which is produced in large quantities in the bone marrow. "It is a molecule that attracts cancer cells towards the bones".

In this excerpt, as a background to the rest of the story, the journalist explains that bones are thought to provide a specially *fertilized soil* where cancer cells can *lodge*. The researchers have found further evidence supporting this theory by the identification of a molecule (RANKL) in the bone marrow which appears to *attract* cancer cells towards the bones. Although this last expression does not belong to the DISSEMINATION source domain, against the background presented it helps to understand how the *soil* plays an active role in metastasis.

The essence of Paget's hypothesis – that organs provide a conducive environment for cancer to develop – is also creatively expressed in (30) but through JOURNEY metaphors:

- (30) Las metástasis no se producen 'al tuntún', ni tan aleatoriamente como a veces podría pensarse. Este viaje de las células tumorales a otros órganos del cuerpo humano, [...], está estrictamente dirigido por complejos mecanismos celulares. Sólo ahora, y después de décadas de investigaciones, parecen vislumbrarse algunas de las claves que permitirían frenar este proceso. La última evidencia sobre las metástasis del cáncer de mama hasta los pulmones (su destino preferido) lleva de nuevo la firma del científico español Joan Massagué. (em42)

'Metastases do not occur 'without rhyme or reason', nor as randomly as might be thought. This journey of tumor cells to other organs in the human body, [...], is strictly guided by complex cellular mechanisms. Only now, after decades of research, are we beginning to glimpse some of the keys that might bring this process to a halt.

The latest evidence about breast cancer metastases to the lung (their favorite destination) again bears the signature of the Spanish scientist Joan Massagué.

In (30) the article opens with a description of metastasis as a *journey* which is *guided* by complex cellular *mechanisms*. In addition, the tendency of cancer cells to metastasize in the lungs is expressed by stating that cancer cells have *favorite destinations*. Further down the article, cells are said to *campar a sus anchas*, which is an idiomatic expression in Spanish. *Campar* means 'to camp' and *a sus anchas* 'at ease', comfortably.

Finally, in Example (31), the fact that cancer cells spread through the blood vessels is conveyed metaphorically by elaborating on the JOURNEY theme:

- (31) Las mutaciones que contienen algunas pocas células, sin embargo, favorecen un viaje casi imposible en el que deben sobrevivir en el torrente sanguíneo (se han detectado células malignas que emplean a las distintas células de la sangre como vehículo de transporte), vencer los ataques del sistema inmunológico, adherirse y traspasar los capilares, adaptarse a un nuevo medio [...] ahí volver a proliferar hasta formar un nuevo tumor. Todas estas acciones tienen lugar, "muy probablemente", según Massagué, gracias a la participación de medio centenar de genes. De ellos, tan solo 18 se han identificado como participantes en el trayecto. Otros 30 participan exclusivamente, al parecer, en el mecanismo de nidificación en los pulmones. (ep48)

‘The mutations present in a few cells, however, favor an almost impossible journey in which the cells have to survive in the bloodstream (some malignant cells have been seen to use different blood cells as a means of transport), beat off the immune system’s attack, bind to and cross the capillaries, adapt to a new environment [...] and proliferate there again until they form a new tumor. All these actions “very probably” take place, according to Massagué, thanks to the participation of around fifty genes, 18 of which have been identified as participants in the journey. Another 30 only seem to participate in the nesting mechanism in the lungs.’

In (31), metastasis is depicted as an impossible *journey* in which some malignant cells use blood cells as a *vehículo de transporte* (‘means of transport’). The JOURNEY metaphors are combined with other metaphors to explain the role of two types of metastasis-related genes. The first set of 18 genes appear to be involved in the movement of cancer cells through the blood vessels. To describe this process the JOURNEY metaphors are combined with war-related expressions, giving rise to a more complex scenario in which cancer cells are seen as participating in a dangerous and difficult *journey*. The second set of 30 genes appear to play a role in establishing the tumor cells in the new organ. In this case, the journalist resorts to the *nesting* metaphor to highlight their different role in the metastatic process.

Although most of the expressions drawn from the metaphorical systems and used for metastasis are conventional, this section has shown that some metaphors can be creatively exploited to achieve particular discursive effects. In (27) and (30) the expressions cluster around the lead of the article to initiate the narrative in an evocative and vivid way for the reader. In addition, in (29) and (30) the linguistic metaphors are exploited to explain particular aspects of metastasis.

Reference to the original scientific articles in some cases has revealed that in their popularizations journalists draw on the metaphorical systems employed by scientists to varying degrees. They adopt and adapt them in consonance with the new context of situation through simplification and personification and, in some cases, display great ingenuity in their development of associated meanings and combination with other metaphorical systems to extend the explanatory function in a highly appealing fashion for their readership.

7. Conclusions

The analysis has shown that non-expert genres draw on the metaphorical systems characteristic of metastasis in specialized discourse but, overall, it could be argued that the coverage of the process and the images used for its explanation in

the English and Spanish press showed marked variation in the cross-linguistic comparison.

In the English subsection the process is presented with little metaphorical aid, although metaphorical expressions from the INVASION AND COLONIZATION source domain were the most prevalent, together with some expressions instantiating the MIGRATION source domain and one realization of the JOURNEY theme. The scant presence of metaphorical expressions in *The Guardian* was particularly striking, and could be related to the negative connotations associated with colonization and the British Empire. The low numbers for MIGRATION metaphors and the absence of DISSEMINATION images might be explained by the general tendency towards the use of less technical metaphors in the English press when popularizing cancer-related knowledge (Williams Camus, 2015). In contrast, in the Spanish subcorpus, the process of metastasis was more prominent and the articles displayed a wider range of images from the four domains characteristic of specialized discourse.

Although in general the metaphorical expressions employed are fairly conventional, the manual analysis revealed a degree of creativity involved in the recontextualization of metastasis in which metaphors performed a number of textual functions. Personification was used as a strategy to bring scientific advances closer to the readers by portraying biological entities vividly as villains participating in delinquent activities or displaying immoral behavior. Although this was less prominent in the English subcorpus, the personification of biological entities in the Spanish press allowed journalists to delve into the microbiological interactions taking place in metastasis. The sample text chosen for detailed analysis was not representative of the coverage of metastasis in the English press, but it was selected for its particularly original and pedagogical use of intertextual metaphor and other metaphorical expressions. The combination of metaphorical systems was particularly noticeable in the Spanish subcorpus, with metaphors forming clusters or stretched throughout the texts. In this way, they not only help to explain particular aspects related to metastasis but also provide the articles with cohesion because the combinations involved an underlying PATH schema. In addition, a number of examples, mainly from the Spanish subset, served to illustrate how, in some cases, the metaphorical expressions were creatively elaborated in what Knudsen (2003) calls the 'opening up' of technical metaphors.

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Multimodal creativity in figurative use

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This chapter attempts to provide insights into actual language use in multimodal discourse. Observation and analysis focus on multimodal creative use of stylistic patterns: extended metaphor, metonymy, visual pun, allusion, hyperbole, personification. The study also brings out the role of semiotic elements and the significance of background information comprehension and interpretation of multimodal discourse.

My aim is to explore multimodality as a tool, applicable in creative figurative thought instantiations. Multimodal discourse reveals the capacity of the human brain to express figurative thought in various semiotic modes. As our brain is inherently multimodal, it is able to cognise figurative meaning in both verbal and non-verbal representation: visual, audial, body language, sound, color.

Keywords: multimodal discourse, figurative thought instantiations, structure of thought, embodied experience, semiotic mode

1. Introduction

Multimodal creativity in figurative use lies in the domain of cognitive stylistics, which forms an integral part of cognitive linguistics, exploring figurative language and figurative meaning construction in discourse, multimodal discourse and its semantic analysis included. Cognitive stylistics views stylistic techniques (metaphor, extended metaphor, metonymy, pun, allusion, hyperbole, personification, and so on) not only as patterns of language but first and foremost as patterns of thought. In the cognitive stylistic framework, a stylistic pattern forms a structure of thought, a cognitive inference tool, applicable in novel figurative thought instantiations (Naciscione, 2014b, p. 121). Cognitive stylistics explores figurative aspects of creative language use, its stylistic features and their modes of expression in both verbal and non-verbal representation.

Exploration of patterns of figurative thought and language started attracting more scholarly attention in the 1990s, that is, only after much research was done on conceptual metaphors. These studies also yielded new insights into the role of metonymy and the workings of metonymic conceptualization (Gibbs, 1994, pp. 319–358). Studies of the interaction of metaphor and metonymy provided awareness and understanding of the fact that metaphor and metonymy could be intertwined¹ (Goossens, 1995, pp. 158–174). For further studies of the distinction between metaphor and metonymy, see Barcelona, 2000; Dirven, 1993).

Recent research in discourse analysis has turned to the phenomena of metaphor and metonymy as resources for innovative linguistic creativity (for an overview, see Hidalgo-Downing, 2015). Metaphorical and metonymic creativity is frequently researched as a cognitive tool for the conceptualization of human experience. Recent decades have witnessed another important turn in research on discourse and multi-semiotic modes of communication instead of single isolated sentences. This turn includes stylistic aspects of multimodality (see Forceville, 2015; Forceville & Urios-Aparisi, 2009; Hidalgo-Downing & Kraljevic Mujic, 2013; Hidalgo-Downing, Kraljevic Mujic & Núñez-Perucha, 2013; Kress & van Leeuwen, 2006; Naciscione, 2005, 2010, 2014b; Pinar Sanz, 2015).

Multimodal representation reveals how thought and language function. Additionally, it features the development and sustainability of figurative thought both visually and verbally. Further, it discloses the creation of new meaning in metaphorical and metonymic conceptualizations. Extended metaphor functions in all types of text, in both verbal and visual discourse, involving more than a single figurative mode of expression: this is generally known as multimodality. Multimodal representation is a special type of discourse, exploring semantic, stylistic, semiotic and psychological elements to achieve social, political or economic ends.

General theoretical issues need to be addressed. Specifically, these are issues that help to understand multimodality irrespective of the empirical material the research is based on. One of those issues is comprehension and identification of stylistic techniques in multimodal representation.

1. Goossens suggests a new term “metaphtonymy” as a cover term for cases when metaphor and metonymy are found in combination in actual natural language expressions (1995, p. 159). Interaction of the two patterns may take several forms, which certainly requires further scrutiny. By way of comparison, extended metaphor also involves both the patterns – metaphor and metonymy. However, the difference lies in the fact that metaphor remains the leading pattern with metaphorical sub-images, linked metonymically by associations of contiguity. Moreover, extended metaphor may cover longer stretches of discourse, including other stylistic patterns: pun, allusion, personification, hyperbole, as the empirical material used in this chapter reveals.

An area of research that calls for more attention consists of the defining features of multimodal discourse. Cognitive research offers several formulations. Forceville argues that in multimodal metaphor “target, source, and/or mappable features are represented or suggested by at least two different sign systems or modes of perception” (2008, p. 463). Goodman considers that “creative multimodality reveals how language functions” (2006, p. 244). While accepting these views, I would argue that multimodal discourse also reveals how thought functions: it features the development and sustainability of figurative meaning in discourse (Naciscione, 2014b, p. 125).

I believe that the key traits of multimodal discourse need to be viewed from the cognitive perspective: multimodal discourse applies stylistic techniques from more than one semiotic mode of expression; the verbal works together with the non-verbal in constructing new meaning in figurative conceptualizations, revealing patterns of thought that may be manifest in different semiotic representations (Naciscione, 2010, pp. 175–201). Arguably from the cognitive perspective, multimodal discourse forms extended figurative thought.

This chapter attempts to provide insights into some of the common properties that emerge in actual language use in several types of multimodal discourse: the print media, along with the discourse of advertising and political discourse. Observation and analysis are based on multimodal creative use of both lexical metaphors and metaphorical phraseological units. Multimodal discourse incorporates other stylistic techniques: extended metaphor, metonymy, visual pun, allusion, hyperbole, personification. Exploration of multimodal creative use also focuses on the role of semiotic elements and the significance of background information in multimodal discourse for comprehension and interpretation.

The chapter is structured as follows. Section 2 presents cases of creative use of figurative thought in the print media. These provide a dynamic link between the visual representation and the textual discourse of the related analytical article. The study discloses the benefits of an embodied approach (posture, gestures, facial expressions, gaze) in conveying bodily sensations, as well as the potential of semiotic elements in constructing figurative meaning (color, symbols, photomontage and the layout of the visual).

Study of metaphor in discourse naturally leads to the concept of extended metaphor. Section 3 deals with the discourse of advertising and brings out the variety of discursal manifestations of extended metaphor, uncovering the role of metonymic links in the extension of the metaphorical image. I argue for the technique of extended metaphor as a structure of thought and a cognitive inference mechanism. Extension of the metaphorical image is achieved by metonymic associations of contiguity. Thus, metonymy invariably forms part of every extended metaphor which results in metaphorical and metonymic conceptualizations that work as a tie in visual and textual discourse, forming a figurative account of facts,

events and experiences. Extended metaphor functions not only in thought and language, but also in visual representation and its perception.

Section 4 takes a closer look at the multimodal use of semiotic modes in political discourse that involve reasoning with the aim of persuasion. Political discourse displays an inevitable dynamic use of metaphor, variegated semiotic modes, including a wide use of symbols. The capacity to employ other semiotic modes is a natural phenomenon in multimodal discourse, as established by cognitive linguistics.

Section 5 examines multimodal creativity in political discourse, focusing on the role of figurative conceptualization in political argumentation and visual satire, and ways used to enhance political arguments to make them memorable.

The chapter contains an extensive Glossary with clear-cut definitions of key terms and concepts in Cognitive Stylistics, which support and reflect their analysis.

2. Multimodal representations in the print media

2.1 Embodied cognition in multimodal print articles

The print media frequently employ multimodal representations in articles with the aim of highlighting and interpreting the message conveyed. The article “Be the best seller” (see Figure 1) catches the eye with a sizeable headline marked in bold. The headline conveys two meanings, forming a pun. The opening paragraph informs us that the woman has been shortlisted for a new job. She is thinking about how best to present herself, that is, how best to sell herself at the interview.

The picture is the visual focus of the article, depicting the woman’s bodily sensations of anxiety and fear. We observe somatic, emotional and perceptual processes simultaneously. These raise awareness of her physical and emotional state, judging by her posture and facial expression that signal her tension and stress. She is anxious to be a success. We see her frowning and biting her lips with a frightened look in her eyes. She is trying to control her shaking knees, desperately clutching at her bag. In this way, the functioning of the mind is imparted and experienced through the body. The embodied representation of her agitated state provides a link with the text. With no smile on her face and no confidence in her posture, she is not going to impress her interviewers.

The layout of the picture carries meaning. The woman has been forced into an emotional corner: a difficult situation which she has little or no control over. Saying that she is actually cornered forms a visual pun: she is in a corner with no retreat and she finds herself in an awkward and embarrassing situation (Naciscione, 2005, 2010).



Figure 1. *Financial Times*, 25 June, 2003, p. 6

Color is a semiotic mode that in visual representations works as a powerful means of expressing human experiences. The play of red and orange in the background enhances the sense of anxiety that prevails in the picture. I follow Arnheim in believing that in every visual representation, shape, color and movement possess dynamic qualities (1974 [1954], p. 437). These dynamic qualities prove to be an inseparable aspect of the visual experience.

Recent developments in cognitive research reveal interconnections between the body and the functioning of the mind. Gibbs makes a case for an embodied view of linguistic meaning. He holds that “the idea that significant aspects of thought and language arises from, and is grounded in, embodiment” (2003, p. 1). An embodied approach enables an understanding of a person’s state of mind through the body: the functioning of the mind is communicated and experienced through the body. According to Gibbs, “[p]eople’s subjective, felt experiences of their bodies in action provide part of the fundamental grounding for language and thought” (2003, p. 2). Gibbs also argues that embodied cognition arises from, and is sustained through, ongoing interactions between brain, body and the world (2006, p. 281). As there is no disembodied mind, the things that are meaningful to us and how they are meaningful must be a result of the nature of our brains, our bodies, our environment, and our social interactions, institutions, and practices (Johnson, 2007, p. 12).

Studies in cognitive science have underscored the neural basis for metaphorical thought. This field of scholarly research developed along with the emergence and development of cognitive science, starting in the mid-1970s. Lakoff & Johnson hold that the Neural Theory of Language reveals that metaphors operate dynamically (2003 [1980], p. 259). Neurobiologists explore the body's relationship to the mind, calling it "experiential engagement of the brain through the body" (Homann, 2010, p. 96), as it is the brain that orchestrates our interactions with the world around us.

In the print media, visual representation forms part of the analytical article whose text usually presents a great variety of use of stylistic patterns; extended metaphor displays an enormous potential in extension of metaphorical thought in figurative conceptualizations, creating sustained figurative networks (Naciscione, 2016, p. 252). The embodied visual representation of the woman's state of mind in Figure 1 provides a semantic link with the text. The metaphorical extensions of the best-seller stretch throughout the analytical article that follows the picture and the headline: thinking about selling yourself at the interview, not wanting to undersell yourself or price yourself out of the market, or be tempted to overprice yourself. All these metaphors form a figurative network, metonymically linked by associations of contiguity to the base metaphor *best-seller*:

a **best-seller** → selling yourself ... to undersell yourself ... to price yourself out of the market ... to be tempted to overprice yourself.

Let me explain this figurative network. A *best-seller* is the base metaphor that in the text is followed by a string of metaphorical sub-images, providing a figurative development of the metaphor and forming a figurative network, which is part of any extended metaphor: it reflects an extended metaphorical thought. The sub-images are metonymically linked to the base metaphor by associations of contiguity.

The stylistic pattern of extended metaphor is inherently dynamic in discourse. It provides for the development and sustainability of metaphorical thought and language in discourse: it crosses sentence boundaries, contributing to the semantic and stylistic cohesion of text (Naciscione, 2006). Sustained use consists of developing an image over a length of text or multimodal discourse as part of the interrelated web of a figurative network (Naciscione, 2010, p. 254). The visual effect works together with the verbal in creating a visual pun. The metaphor in a headline is frequently extended over the whole text, performing a sustainable cohesive text-embracing function.

In interpretation, I follow Gibbs & Colston, who see use of figurative language as a context-sensitive dynamic system that incorporates multiple forces which are closely coupled (2012, p. 340). Dynamic system approaches treat figurative behavior as a whole system activity (i.e., interaction between brain, body, and world)

(2012, p. 341). The analysis of multimodal representation in the print article “Be the best seller” illustrates the benefits of this approach in seeking to understand the mind. The reasons are cognitive: figurative thought may arise from embodied experience. “Cognitive metaphor theory has significantly enhanced understanding of the dynamic links between bodily experiences, pervasive patterns of thought, culture, and linguistic structure and behavior” (Gibbs, 2013, p. 16).

2.2 Sustained use of metaphorical image in multimodal texts

Let me turn to another illustration of sustained figurative networks in the print media. Sustainability of figurative thought is a regular feature of multimodal discourse. A sustained metaphorical image acquires a discourse dimension, and promotes semantic and stylistic cohesion of the visual and the textual, providing for the involvement of other stylistic patterns in an extended figurative instantiation. My empirical observations and analysis of the print magazines, e.g. *The Economist*, *The Spectator* and *TIME*, allow me to draw generalizations about the use of metaphorical thought in magazine covers and in leading analytical articles. This is a special multimodal discourse technique used in the print media: the magazine cover features a striking visual representation whose metaphorical thought is semantically and stylistically linked to an analytical article that may be pages away in the same magazine (see Naciscione, 2010, pp. 191–197).



Figure 2. *The Economist*, 9 October, 2003, Cover Page. The article is in the Leader section at: <http://www.economist.com/node/2121856>

The print media present a great variety of this stylistic technique. I would like to offer a brief insight into its enormous potential. Let me take a closer look at the use of the phraseological unit *the stick and the carrot* in this copy (see Figure 2) of

The Economist. The creative visual representation on the cover page is genuinely thought-provoking: it catches the eye while its figurative use engages the mind. It is usually the cover page that effects a sale.

The magazine cover presents both the notional constituents of the phraseological unit: a picture of a huge luscious carrot, taking center stage, while the second notional constituent *the stick* is given verbally in question form: “Where’s *the stick*?” Stylistically, this is a case of allusion where both constituents serve as an explicit verbal and visual reference to the image of the phraseological unit. Thus, both the image-bearing constituents *the stick* and *the carrot* perform a metonymic function: the two separate constituents stand for the whole phraseological unit. In a way, they allude to the full form of the phraseological unit *the stick and the carrot*, which is identified by the reader through force of association.

The hyperbolic enormity of the carrot is out of proportion to the smallness of the businessman, presenting the incommensurate executive salary in contrast to the input of the businessman. The metaphorical image of this phraseological unit has been extended to the Leader section, which contains an analytical article dealing with the problem of lavish executive pay, exploring the reasons for over-generous salaries and bonuses, and seeking to propose a solution. *The stick* is not there, as strict financial discipline would require. The basic meaning of the phraseological unit is not lost; it has resulted in creative changes, determined by the thought and the context of the article.

The figurative thought, expressed in the magazine cover, is carried over and extended in the article dealing with the problem of disproportionate executive salaries. Interestingly, the text of the article picks up the main metaphorical thought, sustaining it throughout the text. The headline of the analytical article: “Bosses’ pay: Where’s *the stick*?” acts as a recall cue to the visual representation of the image of the phraseological unit on the cover page, whose metaphorical image of *the stick and the carrot* extends over the whole article. Despite the warning that this policy is not good for the company itself, “bosses *are being fed ever bigger carrots*. If *the stick is finally applied to their backside, they walk away with yet another sackful of carrots to cushion the blow*”. The analytical article presents argumentative analysis and arrives at the conclusion that the solution has to lie with the shareholders who, after all, *supply the carrots*. In creative use, phraseological units acquire a new form and meaning, which is a textual meaning unique to a specific instance, determined by the thought and the context (Naciscione, 2010, p. 40).

Comprehension relies on ties between the visual and the verbal that are equally meaningful parts of multimodal discourse. The figurative network reflects the development of extended metaphor: the metaphorical image is sustained throughout the text. Extended metaphor is one of the manifestations of creative use of figurative thought.

It is generally known that creativity is pervasive in language use (Lakoff & Johnson, 2003 [1980], p. 248; Lakoff & Turner, 1989; Carter, 2004; Pope, 2005, pp. xvi–xviii). An understanding of its mechanisms facilitates an insight into creativity. This also applies to the realm of multimodal use.

We perceive figurative meaning, as Arnheim argues that “all perceiving is also thinking” (1974 [1954], p. 5). He sees vision as active exploration. The human mind perceives and interprets the image with all its conscious and unconscious powers (op. cit., p. 461). Thus, vision is not passive, but rather a powerful sense. Mental visualization forms a mental image in our mind’s eye.

Cognition involves an understanding of both literal and figurative meaning that enables people to conceptualize their experience and the external world. Gibbs holds that figurative thought functions automatically in people’s online use and understanding of metaphorical utterances (1994, p. 255).

In multimodal discourse, we witness the social-cognitive dynamics of metaphor performance (see Gibbs & Cameron, 2008). The image-bearing constituents of phraseological units lend themselves very well to creative textual and visual representation, including abstract qualities and implicit messages. Mental visualization of instantial stylistic use forms part of cognitive performance, enhanced by visual representation of the extended image. Visualization is a reflection of figurative thought. I would argue that metaphor occurs not only in thought, language, and visual representation; it also occurs in perception. Visual representation of a phraseological image attracts both the eye and the mind. It is a common technique in print media texts. These case studies reveal that multimodality presents extended figurative thought in use (Naciscione, 2014a, p. 225).

Thus, the stylistic technique of extended metaphor provides for the development and sustainability of metaphorical thought and language in discourse, crossing sentence boundaries and contributing to the semantic and stylistic cohesion of text. It expands the semantic and syntactic limits of metaphor. Creation of an extended metaphor in discourse is a skill which forms part of the human ability of continued abstraction (Naciscione, 2004, p. 178). Multimodal representation discloses creation of new meaning in metaphorical and metonymic conceptualizations.

2.3 Multimodality as a cross-language and a cross-cultural phenomenon

Metaphorical concepts frequently arise as a reflection of global cross-language and cross-cultural phenomena, emerging in both verbal and multimodal discourse. When we compare multimodal texts in different languages, we observe similarities shared in both multimodal and verbal discourse (e.g. consider Figure 3).



Figure 3. *Financial Times Deutschland*, 18 Nov., 2011, p. 16

The visual representation of the analytical article in Figure 3 has been foregrounded, displaying a black eagle on a golden background featuring the coat of arms that metonymically stands for the Federal Republic of Germany. The German eagle has been fettered in strong chains by the European Union, which tried to introduce stricter fiscal controls in 2010–2011 that were vehemently rejected by Germany. The eagle is trying to liberate itself: some of the chains have already been severed, and pieces are flying in all directions, dynamically speaking their force.

One of the most common features in multimodal discourse is the use of visual pun, which invariably emerges as a result of using a metaphor in text and a visual representation of the corresponding literal meaning. As the German metaphorical phraseological unit *seine Ketten sprengen/zerreißen* (EN *to throw off/break one's chains/shackles/fetters*)² is employed in the headline, it refers to and covers the entire text, figuratively representing the quintessence of the analytical article while the visual displays its literal meaning.

Metaphors are frequently employed in newspaper headlines, imparting significance for the whole discourse and conveying an overtone. In multimodal use the figurative thought expressed in the headline is reinforced by visual representation,

2. Cross-language features include, for example, similar metaphorical phraseological units. This is not the result of borrowing. The German phraseological unit *seine Ketten sprengen/zerreißen* has equivalents in other European languages: EN *to throw off/break one's chains/shackles/fetters*; FR *briser ses chaînes*, SP *romper las cadenas*; LV *saraut savas ķēdes*, etc. According to Piirainen, these metaphorical expressions may be of polygenetic origin, that is, they may have originated in parallel, independently of each other due to a common experience in the real world (Piirainen, 2012, pp. 296–316).

which forms a visual narrative in its own right (for more cross-language examples of multimodal use of metaphorical concepts, see Naciscione, 2018).

Thus, in this multimodal discourse the focus of the article is a visual representation of the German eagle breaking free of its chains. Visual representation of figurative thought performs an essential semantic and stylistic function: it enhances and interprets the image, bringing the literal meaning to the fore and creating a visual effect. This is an important feature of multimodal discourse as a cross-language technique in the print media.

2.4 Use of photomontage in multimodal print discourse

The print media may resort to the use of a broad range of semiotic elements in multimodal discourse. Photomontage appeared in the 19th century and was used in photographs. Use of digital photomontage is a striking, relatively new medium for conveying figurative meaning multimodally, e.g. see Figure 4:

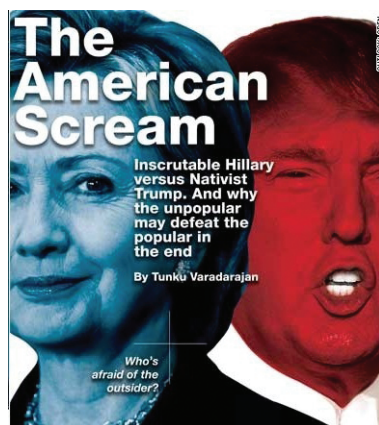


Figure 4. *OPEN*, 12 March, 2016, Vol. 8, Issue 11, Cover Page

The technique of photomontage creates a composite photograph: two photos are combined in one picture (see Figure 4), realized by image-editing software. Moreover, the picture applies the technique of photo manipulation: eye-catching color alterations, introduced to create a new modified image, express a political message and enhance the hyperbolized juxtaposition.

As we perceive the visual information conveyed to the eye in the multimodal representation, we gain factual information. Color is of particular interest, as this semiotic element frequently delivers a powerful message. The choice of colors is not accidental. In this visual representation, color stands for the political party that

the candidate belongs to. In the United States, blue metonymically stands for the Democratic Party while red is associated with the Republicans.

The artist is ruthlessly examining the two candidates. The high saturation of red is disturbing. The color of Trump's face and his facial gestures create a dramatic effect, in contrast to Hillary, who is struggling to be likeable and reserved. Trump is performing one of his favorite grimaces, which tells us that he is angry: his eyes are narrowed as he is trying to reinforce the effect of dominance, and his lowered jaw is thrusting out in an attempt to give the impression that he is in charge. This is the facial expression of anger he has frequently used at public events.

Thus, use of bright and saturated colors is an attention-grabber: to seize the reader's attention immediately. Importantly, color carries metonymic meaning by associations of contiguity.

Multimodal representations frequently demonstrate linguistic and artistic creativity, as multimodality calls for new ways of both creation and interpretation. Creative multimodal discourse conveys implicit messages that are not directly expressed in the textual or the visual alone. Creativity embraces "radical forms of recreation and includes actively engaged kinds of re-vision, re-membling and re-familiarization" (Pope, 2005, p. xvii). Multimodality dramatically increases the opportunity for creativity "by exploiting the distinct characteristics and meaning potentials of the various modes and their combinations" (El Refaie, 2015, p. 15).

The headline of the cover page deserves special attention. The term "the American dream" goes back to James T. Adams' famous formulation in his book "The Epic of America" (1931) in which he states that the American Dream is the dream of a land in which life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement. The creative replacement of the second constituent of the phraseological unit *the American dream* turns it into *the American scream*, which acquires significance for the whole multimodal representation. It becomes prominent and evokes a feeling of pain. However, the experience is not only perceptual: we also perceive the image of *the American scream* aurally owing to onomatopoeia,³ or rather, to the onomatopoeic metaphor, which makes the pain audible. Sounds underscore meaning. As Pope aptly puts it, "the sound echoes the sense" (Pope, 1709, Line 365).

3. Traditionally, onomatopoeia has been viewed as sound imitation. As a feature of sound patterning it has been studied from different perspectives. It can occur either in a lexical form (e.g. *scream, brawl, bang, buzz, hiss, gargle, snore, tingle, thud, crack, slurp*) or in a nonlexical form (*brrrm brrrm, vroom vroom*), which has no linguistic structure (Simpson, 2004, pp. 87–88). Another significant area of study in its own right is exploration of onomatopoeia in the stylistic texture of poetry (*rhyming, alliteration*). Over the recent decades onomatopoeia has been studied under the general heading of sound symbolism (Crystal, 1994, pp. 250–253).

We could watch the American 2016 Pre-election Campaign unfold into a rocky, unpredictable and messy experience from beginning to end, turning the American dream into the American scream. This had already become evident as early as March, 2016, the time when this political caricature was created.

3. Multimodal discourse in advertising

3.1 Multimodality in business advertisements

Multimodality lends itself to creation of meaningful novelty. It does so by using unexpected elements and securing a connection between seemingly unrelated ideas and areas. This perhaps explains why a multimodal approach is common in business advertisements.

What works best is an advertisement that makes you look twice. It is designed to engage its audience and promote the company's services. As the proverb has it, there is no second chance to make a good first impression.

WHAT MAKES US BETTER THAN THE REST...

- EXCLUSIVE FLIGHTS
- PREMIER TOURS
- PREMIER HOTELS
- CAREFULLY SELECTED HOTELS
- CHINA SPECIALISTS
- WINE & SPIRITS
- FREE GUIDES
- FREE DISCOUNT VOUCHERS
- A KNOWLEDGEABLE, EFFICIENT TEAM TO BACK UP OUR SERVICE

TO YOU THE AGENT WE OFFER:

- 12% DISCOUNT VOUCHERS ON EVERY BOOKING TO BE USED AGAINST YOUR OWN CADOGAN HOLIDAYS
- TRAVEL CONCESSIONS
- EDUCATIONAL
- XMAS ADVERTISING AND PROMOTIONAL SUPPORT

Hertz
PREFERRED PARTNER

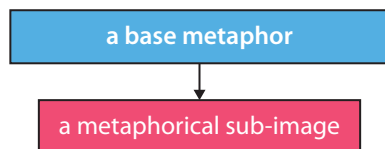
CADOGAN HOLIDAYS
THE INDEPENDENT OPERATOR YOU CAN TRUST
RESERVATIONS: 01703 828313

Figure 5. *Travel Weekly*, 30 Aug, 1999, p. 20

A good example of a multimodal advertisement appears in the extract (see Figure 5) from *Travel Weekly*, the leading publication for the travel industry in the UK market. The UK travel company *Cadogan Holidays* was nominated as the best short haul tour operator in 1999 for the third year running, offering tailor-made luxury holidays with a superior level of service.

This advertisement employs the metaphorical phraseological unit *a shaggy dog story*, which in its base form denotes an improbable, often lengthy story that is to all intents and purposes meaningless. However, this meaning is emphatically denied in the advertisement, explaining that it is *an award-winning pedigree*. This causes an extension of the image of the metaphorical phraseological unit *a shaggy*

dog story, creating an extended metaphor with the sub-image *an award-winning pedigree*, linked metonymically. Interaction between metaphor and metonymy, establishing cohesive semantic and stylistic ties in the text, is a categorial feature of extended metaphor (Naciscione, 2016, p. 241). This instantiation forms the most common type of metaphorical extension, as seen by the chart below.



Let me explain. This chart presents the most common type of extended metaphor: a successive use of a metaphorical sub-image, sustaining the image of the base metaphor. In this case, the phraseological unit *a shaggy dog story* is followed by a sub-image *an award-winning pedigree*. At a closer look we notice that a pedigree is part of a broader category – that of the dog. Hence, the relationship *pedigree* – *dog* is represented by the most common type of metonymy PART FOR WHOLE. Thus, the link between the base metaphor and the extension is provided by associations of continuity, that is, by metonymic links. (For other basic types of metaphorical extension, see “Types of extended metaphor” in Naciscione, 2016, pp. 246–249).

When discussing interaction of tropes, Gibbs indicates that metaphor and metonymy are combined in natural language (1994, p. 449). Indeed, this is also a widespread phenomenon in stylistic use. Moreover, the interaction between the figurative meaning of the word *dog* in the text and its literal meaning in the picture results in a visual pun, as it invariably will in any multimodal representation.

Interestingly, the advertisement features a dog with mouth open that is calm, relaxed and unstressed: it is a happy dog face. Cynologists believe that dogs also communicate with their eyes, mouths and facial expressions (Benal, 2011). This is canine body language. The image of the dog perfectly matches the gratifying message of the advertisement.

3.2 The role of background information in interpreting political advertisements

Figurative use may communicate unique political and social messages. These messages need to rely on historical, political and social information for comprehension and interpretation. The factual information offered by the street poster (see Figure 6) proves insufficient.

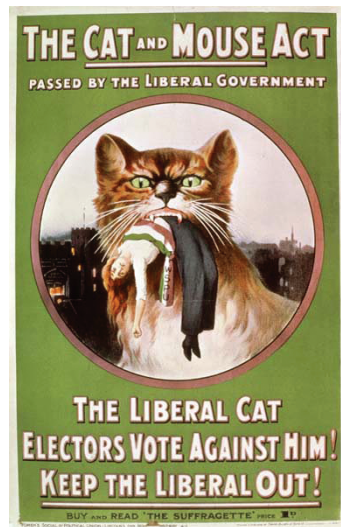


Figure 6. A street poster for the Women's Social and Political Union (WSPU), 1914, displayed at the Museum of London

The Cat and Mouse Act is the usual name for the Prisoners (Temporary Discharge for Ill Health) Act passed by the Liberal Government in 1913. Militant members of the WSPU, commonly known as suffragettes, campaigned for women's right to vote. Some were imprisoned. In protest, they went on hunger strike. They were ill-treated and force-fed, leading to a public outcry. This allowed the suffragettes to be released as soon as the hunger strike affected their health. When they recovered, they were re-arrested to serve out the rest of their sentence. The campaign against inequality and injustice is the main thrust of this political advertisement.

The name of the Cat and Mouse Act is an allusion to the metaphorical phraseological unit *a game of cat and mouse*, which denotes a cat's habit of playing with a mouse before finishing it off. It refers to the way the government seemed to be playing with prisoners as a cat might toy with a captured mouse, underscoring the cruelty of repeated release and re-imprisonment.

Knowledge of background information is certainly of enormous help. However, a picture is worth a thousand words, as the proverb goes. The perception of an image, whether lexical or phraseological (Naciscione, 2010, pp. 73–74, 291), is a cognitive process, which creates a mental picture in the imagination, a kind of visualization in the mind's eye. Perceptual human thinking seeks to interpret the visual and establish the meaning and the causes of the presentation.

The focus of the poster in Figure 6 is the hyperbolized size of the cat with a ferocious look in its eyes in contrast to the diminutive, emaciated body of the suffragette that it has captured. The caption “The Liberal Cat” is a succinct

characterization of the Liberal Government. It is based on two stylistic patterns: metaphor and personification, used in one instantiation.

Interestingly, in 1908 the WSPU adopted the color scheme of purple, white and green: purple symbolized dignity, white purity, and green hope. These were also the colors of the flag of the WSPU that covers part of the suffragette's body in the poster. Green is the colour of the background to the poster. The WSPU, led by Emmeline Pankhurst, was the most militant and active organization in the suffragette movement.

Thus, as we have seen, multimodal discourse is a complex form of visual creativity where the verbal is only one mode of expression of figurative thought. The visual reflects experience beyond the possibilities offered by a text. Multimodal enactment of a phraseological image is another mode of presenting a message and visualizing thought. In multimodal representation, discourse acquires a new quality, employing several modes of expression and portraying a whole situation or a process, reflecting aims and interpreting values.

4. Multimodal use of semiotic modes

4.1 Use of symbols in multimodal discourse

Multimodality may also involve non-verbal representation of a concept in other semiotic modes, e.g., the use of symbols. Non-verbal political symbols are used to represent reality in political discourse. Multimodal representation frequently resorts to use of semiotic elements due to their clear-cut graphic persuasive power.

Use of symbols as a visualization technique is a non-verbal mode of expression to be perceived by sight. Identification of symbolic use in a visual representation (see Figure 7) requires in-depth knowledge of the historical and political background.

Political symbolism usually represents a political standpoint. What strikes the eye first here is the red color, a semiotic element symbolizing the Communist Party of the Soviet Union. On examining the details, we see Putin's name where the hammer and sickle replaces its second and third letters, representing the emblem of the Soviet Union and one of the best-known symbols of Soviet power. In this visual representation, symbolism conveys the relation between a concrete image and an abstract idea.

The calligram contains no text apart from Putin's name, which serves as an image of power in Russia today. The hammer and sickle emblem epitomizes worker-peasant unity in the building of communism: the hammer is a traditional symbol of the proletariat while the sickle is a traditional symbol of the peasantry. Thus, Putin's New Russia is represented as being actually the same old Soviet Russia in



Figure 7. Ji Lee, *Putin: A flag with hammer and sickle*, a calligram, 2011

more ways than one. Putin is not going to change his accustomed political ways, means, and habits of mind: old habits die hard, if at all.

A calligram is noted for simplicity of presentation. It creates a visual image, conveying some special significance. This calligram uses symbols to represent the essence of Soviet ideology: the hammer and sickle symbolically convey the conception of Sovietism in Putin's rule. Moreover, the representation is flat: it has no depth. No pictorial space signifies no choice, which is a keyword for Soviet "democracy". Soviet people always had to vote for one candidate, the best one, of course. In today's Russia, choice is in words, not in deeds.

In cognitive linguistics symbolism is treated as a special case of metonymy (Forceville, 2013, p. 252; Lakoff & Johnson, 2003 [1980], p. 40). Forceville has devoted a chapter to metaphor and symbol, and their representation in animation film (2015, pp. 27–44). I believe that metonymy and symbolism is another area that calls for a more detailed study in the future.

4.2 The significance of gesture in multimodal representation

The genre of political caricature is frequently used to provide visual commentary on, or a critical opinion of, political events and developments. Visual artists use caricature to address complicated political and social issues, creating a visual figurative account of facts, events and experiences.

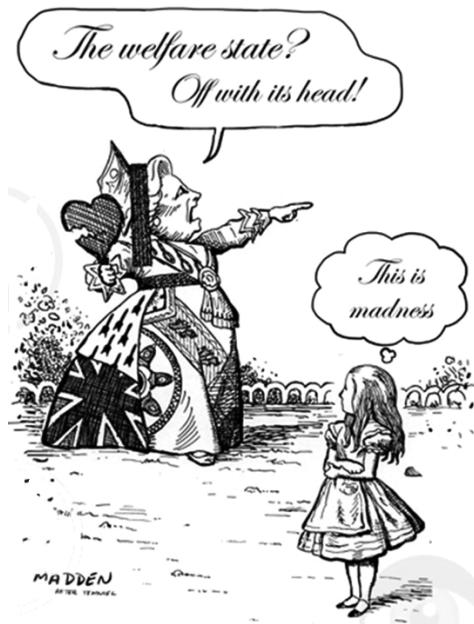


Figure 8. Chris Madden, *Off with its head!* A political caricature, 1983

The caricature (see Figure 8) featuring Margaret Thatcher as the Queen of Hearts from Lewis Carroll's book *Alice in Wonderland* is based on the original illustration by John Tenniel. Thatcher is the very image of the Queen of Hearts, who had only one solution to settling all difficulties, great or small. The allusion is instantiated not only by the close visual similarity but also verbally: Margaret Thatcher's tyrannical pronouncement and Alice's evaluative comment in her thoughts:

Margaret Thatcher: The Welfare State? *Off with its head!*

Alice: This is madness!

The caricature conveys biting criticism of Margaret Thatcher's 1982 plan to dismantle the Welfare State, followed by her attempts to reform major sectors of the welfare system and introduce substantial cuts in education, housing and health services in particular. Indeed, this was madness, as Alice put it.

Thatcher's domineering position is emphasized by the harshness of her posture, the severity of her look and above all by her commanding gesture. Visually, it is a dramatic gesture, serving as an enactment of her political stance and beliefs. Arnheim holds that visual dynamics shows movement of the body and the mind (1974 [1954], pp. 410–414). With her mouth wide open, Thatcher is angrily shouting out her verdict, “*Off with its head!*” As *head* is an integral part of the *body*, the relationship between the two is metonymic, revealing the structure PART FOR WHOLE. Thus, the semantic structure of this phraseological unit incorporates two

stylistic techniques: metaphor and metonymy (see Naciscione, 2010, p. 38). In this caricature one constituent has undergone instantial replacement. This is a case of personification, attributing human characteristics to the Welfare State, which is not human and has no body. Thatcher sees the Welfare State as an enemy to be beheaded. The scathing criticism of Thatcherism in this caricature relies on the portrayal of salient features presented in a hyperbolized way. Hyperbole is frequently used to communicate a political message.

The caricature features many references to political issues that are associated with Thatcherism. Thatcher's regal dress displays the national flag of the UK, frequently used as a symbol of the country. The artist employs metonymy to represent Thatcher's policies: a shield with policemen's helmets, a map of the Falkland Islands, and the ballistic missiles that Thatcher sent to the Falklands during the Falklands War in 1982. Hangman's nooses metonymically stand for the 1983 attempt by the Conservative Government to reinstate hanging as capital punishment in the UK.

Thus, political caricatures commonly perform the function of persuasion through use of figurative stylistic patterns and visual semiotics, all carrying political meaning. The caricature of Margaret Thatcher employs not only metaphor, metonymy, allusion, hyperbole and personification to build meaning but also gesture and other semiotic elements that carry a message.

Instantiation of metonymy in this caricature brings out the role of metonymy in meaning construction in multimodal discourse. It reflects the conceptual metonymy PART FOR WHOLE, disclosing the underlying reasoning and providing "detailed accounts of meaning construction in specific contexts in language use" (Gibbs, 2007, p. 21; see also Barcelona, 2007, pp. 51–53; Panther, 2005, p. 353).

Over recent years, research of the metonymic nature of gesture has yielded interesting findings. Gestures are part of human communication and they are part of multimodal creativity. As to the type of figurative meaning, "gestures are inherently metonymic" (Mittelberg & Waugh, 2014, p. 1747). They assume an important role in communicating meaning. Gestures are considered to be "the main non-verbal, cross-modal communication channel" (Volpe, 2005, p. 1). In performing arts, they quickly and clearly convey the figurative thought, highlighting the meaning. Gesture is central to Shakespeare's plays and hence their productions on stage. The phraseological unit *Off with his head!* is used in three of his plays: *Richard III*, 3, 4; *All's Well That Ends Well*, IV, 3; and *Henry VI*, Part III. These lines are accompanied by vivid and convincing gestures.

4.3 Dynamic use of semiotic modes in political speech

Extended metaphors arise from concrete political experiences, conflicts, clashes, and changes that emerge in different areas of the external world. Metaphorical and metonymic conceptualization is prevalent in political discourse, serving to engage audience reaction. It is consistent with the rhetorical nature of parliamentary speech.



Figure 9. David Cameron, *Commons Tribute to Baroness Thatcher*, 10 April, 2013.
Available at: <https://www.youtube.com/watch?v=KsTdIECilSs>

In a live broadcast Prime Minister David Cameron (see Figure 9) made an eloquent tribute to Margaret Thatcher in the House of Commons two days after her death, drawing on stylistic use to bring out her efficiency and austere demands:

Rome was not built in a day

Her respect for Parliament was instilled in others. Early in her first government, a junior Minister was seen running through the Members' Lobby. His hair was dishevelled and he was carrying both a heavy box and a full tray of papers on his arm. Another Member cried out: 'Slow down, *Rome wasn't built in a day!*' To which the Minister replied: 'Yes, *but Margaret Thatcher wasn't the foreman on that job.*' David Cameron, *Commons Tribute to Baroness Thatcher*, 10.04.2013

The image of the metaphorical proverb *Rome was not built in a day* has been extended in the retort by the junior minister, based on associations of contiguity, forming the most common type of extended metaphor:

built → *foreman*

It is perfectly clear that the job of a foreman is part of the broader notion of building. Thus, the relationship between the two is metonymic, presenting the type PART FOR WHOLE.

Multimodal discourse frequently instantiates various semiotic modes. Auditory and visual perception of non-verbal reactions reveals the embodied response: the tone of voice, laughter, eye contact, shifts in bodily posture and facial expressions, all showing that the MPs have enjoyed the joke. Their lively response falls in with the cognitive findings that “enactment is dynamic” (Lakoff & Johnson, 2003 [1980], p. 287; Jensen & Cuffari, 2014, p. 10).

Cognitive scientists have proved that language is inherently multimodal (Gallese & Lakoff, 2005, p. 2). It uses many modalities linked together: sight, hearing, touch, motor actions, and so on. These neurons respond to more than one modality (Gallese & Lakoff, 2005, p. 4).

Thus, the human brain easily affords comprehension of various modes of expression: the textual, the visual and the audial. This allows us to grasp the significance of the body’s role in the perceptual processes and the interrelation of the mind and the body.

5. Multimodal political discourse

5.1 Multimodal metaphor in political argumentation

Political discourse possesses cognitive purpose. Understanding of political discourse is of great importance for political cognition (for more on political cognition, see van Dijk, 2007, pp. 203–237). Metaphors play a significant part in political discourse: they present and develop arguments with the aim of making a point and driving it home. As Semino points out, they are a particularly important linguistic and conceptual tool for achieving persuasion, “consistently used in politics to provide particular representations of issues, situations and events, and to achieve persuasive effects” (2008, pp. 123–124). It is the political aims that determine the need for reasoning and persuasion, generating a more insightful and personal understanding. The argument should convince the reader or the listener, and ensure its memorability.

The front page of a newspaper should attract, inform and persuade the prospective reader that the paper is worth buying and reading. What strikes the eye on the front page of *The Guardian* (see Figure 10) is the headline presented in big font size, indicating the level of significance. The headline arouses interest due to the creative use of the well-known proverb *The Lord giveth and the Lord taketh away*, which is an allusion to the Old Testament, The Book of Job, 1: 21.



The chancellor giveth
... and he taketh away

● Osborne saves living wage surprise to last

● But dismay at decision to curb tax credits

- Roads, defence, non-doms part of broad package

Larry Elliott and Patrick Winstoun

George Osborne sought to outflank Labour and soften the blow from a £25bn cut to Britain's welfare bill when he made a big rise in the minimum wage the centrepiece of the first Conservative budget in almost two decades.

In a move that went further than Labour was planning at the general election, the chancellor said employers would be forced to pay staff a minimum of £7.20 an hour from next April and raise wages by 6% a year on average to about £9 an hour by the end of the next parliament.

Relating the freedom to deliver to the seventh budget unfettered by coalition, the chancellor eased up on the pace of deficit reduction and reduced the size of the cuts that Whitehall departments would face in the coming years.

On the assumption that the economy grows steadily at around 2.5% a year, the Treasury is now expecting a £60bn surplus in the final year of the parliament - a sizeable war chest for the 2020 election.

Declaring "Britain needs a pay rise - once the campaign slogan of the TUC" - Osborne said he was directly boosting

the national minimum wage of 2.7 million workers aged over 25. The increase, accompanied by substantial welfare cuts over three years, was designed to engineer a rebalancing between the individual and the state - a political intervention to shift responsibility for low incomes from the

"Let me be clear: Britain deserves a pay rise and Britain is getting a pay rise," Osborne said, adding that 6 million people would see their pay increase as a result of what he called the creation of a national minimum wage.

The work and pensions secretary, Iain Duncan Smith, greeted the announcement by punching the air, but the shadow chancellor, Chris Leslie, said "This minimum wage increase is just rebrand of the minimum wage - trying to

Continued on page 6 →



For the Tories, England and St George - the chancellor aimed to crush Labour while fulfilling his own ambitions.

George Osborne is a man of enormous ambition. He is ambitious

he is ambitious for his party. Quite how ambitious we discovered yesterday,

when he delivered his second budget is four months. The chancellor revealed his determination to conquer and colonise the centre ground of British politics, to make it the Conservatives' own. In the process, he aims to drive Labour to the margins, pushing them

His chosen approach is devilishly simple. His goal is to recast the Tories

as the champions of all those who enjoy the admiration or sympathy of their fellow voters - workers, especially in the private sector, pensioners, soldiers - and to let Labour be the advocate of everyone else. He wants the Conservatives to be the party of working people, leaving

To that end, like a grasping relative remembering the words of a good friend at

rummaging through the cupboard of the dying while they lie helpless on the bed, Osborne set about stealing any item of Labour clothing that took his fancy - picking out all those with mainstream appeal. The boldest act of theft was the one that came last, when he appeared

to appropriate - and then top - Labour's election promise of a minimum wage of £8 per hour by 2000. That was too miserly for the generous Osborne, the workers' friend. He would ensure the lowest-paid workers were paid £9 an hour by that same year. *Wages? No, it*

The euphoria of the Tory benches was so great, the chancellor repeated the paragraph, to ensure the TV camera

caught it. Iain Duncan Smith, who just a week ago was privately describing a living wage as a laudable goal but "very difficult" to do, did a kind of double fist pump that became an instant social

Continued on page E 3

Figure 10. *The Guardian*, 9 July, 2015, p. 1

The proverb has retained the archaic ending -th in the third person, singular, owing to its intrinsic semantic and syntactical stability across the centuries, stored in the long-term memory of the people. Importantly, the proverb gives focus to the article and communicates an important political message: *The chancellor giveth ... and he taketh away*. The proverb has undergone instantial replacement to strengthen the argument and make it more persuasive. It also asserts the Chancellor's power and authority.

The instantial form of the proverb is syntactically and semantically broken by use of dots in the middle, which is a graphic stylistic means. Cleft use creates a significant pause, slowing down the process of perception (Naciscione, 2010, pp. 102–107). The pause indicates a time gap between the two parts: giving and taking. Indeed, it was in March, 2015 that the UK Government announced a considerable rise in the minimum wage. When announcing his new budget in the House of Commons on July 8, 2015, Chancellor of the Exchequer George Osborne asserted, “Britain deserves a pay rise and Britain is getting a pay rise”, justifying his decision. His promise appears as a caption at the foot of his photo. However, along with the rise in the minimum wage, he also affirmed his decision

to curb tax credits. *The Guardian* raises concerns whether the gains from raising the minimum wage will be outweighed by the reduction in tax credits.

Stylistic use of the metaphorical proverb concisely conveys the gist of the whole text. It strengthens the argument, making it more convincing. Visually, Mr. Osborne's focused look reveals his determination. His hand is foregrounded to underscore his firm grip on the handle of the red Budget Box, which is traditionally held up for a photoshoot outside 11 Downing Street before the Chancellor of the Exchequer carries his speech in the red Budget Box to announce the Cabinet's annual budget plans to Parliament.

Thus, *The Guardian* has effected a persuasive novel way of breaking news, at the same time providing political argumentation. This multimodal presentation has explored both creative use of figurative language and the possibilities offered by the visual.

5.2 The role of satire in multimodal political discourse

Any crucial political event creates its own figurative expression both verbally and multimodally. It brings to the fore figurative conceptualization of critical developments, disclosing the scope and challenges of events. Visual political satire is a powerful tool that reflects political reality, conflicts and developments, conveying political ideas and messages, and exposing politicians.

Creative multimodal satire features a visual expression of figurative thought, which usually goes together with the verbal in multimodal discourse. Visual satire frequently forms part of an analytical article that develops and sustains figurative thought.

The American presidential pre-election campaign of 2016 provided ample food for political satire that effectively highlighted the pre-election race, analyzing and expressing opinion. For instance, see Figure 11.

The metaphorical headline (see Figure 11) "The brawl begins" has onomatopoeic value that makes it audible. It forms a truthful, though unflattering, characterization of the beginning of the US presidential election race in January 2016. Looking back, we see that the pre-election campaign was a brawl from beginning to end: a rough and noisy struggle between the two candidates. In Figure 11, Hillary Clinton and Donald Trump are in motion: they are getting into the ring, pitted against each other. Cognitively, visual dynamics reflects thought in action. Donald is boasting his strength, exhibiting his bulging muscles and his grandiose sense of self. The spectators are marveling at the jaw-dropping spectacle. As the thrilling spectacle runs its course, they enter a state of disbelief, starting to worry: American politics has taken a dangerous turn. The race for the world's most powerful office has been portrayed from a satirical angle.



Figure 11. *The Economist*, 30 January, 2016, Cover Page. The article is in the Leader's Section at: <http://americanuestra.com/americas-presidential-primaries-brawl-begins/>

Hyperbole is one of the leading stylistic patterns in satire. Hyperbole is part of visual satire by definition. By exaggerating, the artist is sending a critical message to his audience. Distortions of form convey the actual situation in the pre-election campaign. The analytical article in the Leader Section of *The Economist* reveals that satire works together with a host of other stylistic patterns, forming a dense figurative network. Satire is recognized not merely as a powerful stylistic pattern; it is also a strong conceptual mechanism. The base metaphor *a boxing tournament* denotes the whole pre-election campaign. This is sustained throughout the analytical article, forming an extended metaphor, which includes a long line of metaphorical sub-images, linked by associations of contiguity:

a boxing tournament → muscle-bound rivals ... to enter the ring ... a race for ... the first round ... to win ... out of the race ... to mount a counter-attack ... to take the fight ... a close race ... to be on the ropes.

This extended metaphor is a linguistic instantiation for the conceptual metaphor ARGUMENT IS BOXING (Gibbs, 2017, pp. 113–114). A close study of creative use of metaphors in visual satire and the accompanying analytical article reveals that in this multimodal discourse both verbal and visual metaphors are motivated by the conceptual metaphor POLITICS IS SPORT, which is a multimodal conceptual metaphor. Yu defines it as “a multimodal manifestation” of a conceptual metaphor (2008, pp. 79–89).

A satirical visual representation possesses great density that has a strong perceptual effect, creating visual tension. The visual satire in Figure 11 shows many images apart from the two main characters. In the crowd of spectators we also see the Statue of Liberty, which has become a living symbol of freedom and of the United States. The Statue has undergone personification: Lady Liberty is portrayed as a human being who is horrified by what is going on in the US pre-election campaign.

Every single detail bears some significance, including semiotic elements. For instance, the cover of the boxing ring carries the acronym USA, written in three colours: blue against red, representing the two major political parties, with white in-between standing for the undecided.

Thus, political visual satire forms part of multimodal political discourse. Creative use of figurative meaning makes satire an effective way of expressing political commentary and exposing political scandals. Creative use of stylistic techniques underscores the role of figuration in political satire.

6. Conclusion

This chapter examines the creative aspects of verbal and visual representation of figurative thought in multimodal discourse. Semantic and stylistic saturation (Naciscione, 2010, pp. 254, 291) of multimodal representation discloses its capacity for multimodality, the ability to present thought concisely in a small space by creative use of figurative conceptualization and by significant visual details alluding to abstract notions, experiences, events and facts. In multimodal use, figurative thought may be expressed in various semiotic modes: in verbal representations and non-verbal forms in constructing new meaning in creative metaphorical and metonymic conceptualizations. Thus, multimodal discourse displays a boundless capacity for creative use.

Multimodal discourse is dynamic, spreading a metaphorical image over the visual representation and the part of the analytical article that extends the metaphorical image. In this way, extended metaphor creates a network of multiple figurative strands that forms a coherent and cohesive account, constituting a mode of representation of figurative thought. Multimodality reflects extended figurative thought in use.

Understanding of multimodality is an innate cognitive capacity. A cognitive approach promotes perceptual comprehension and interpretation of multimodal metaphor, metonymy, visual pun, allusion and other stylistic patterns in multimodal discourse along with semiotic elements, and brings out their role in figurative

conceptualization. The great variety of multimodal creativity in figurative use calls for further exploration of multimodal discourse.

Glossary

Base form	This is the form of the phraseological unit as a decontextualized unit of language, stored in the dictionary or the long-term memory of the language user, accessed when a discourse situation calls for it. It is generic to all manifestations of a particular phraseological unit in discourse. In practice the dictionary form and meaning, recorded as the headphrase. <i>See: Phraseological unit.</i>
Cognitive Stylistics	Cognitive Stylistics is an integral part of Cognitive Linguistics, exploring figurative language and figurative meaning construction in discourse, multimodal discourse included. Cognitive Stylistics, in comparison to Conventional Stylistics, views stylistic techniques (metaphor, pun, allusion, personification and others) not only as patterns of language but first and foremost as patterns of thought (Naciscione, 2014b). In the cognitive stylistic framework, a stylistic technique is regarded as a structure of thought and a cognitive inference tool, applicable in novel figurative thought instantiations.
Discoursal use	In discoursal use, phraseological units and other elements interact over a stretch of text, which brings out their involvement in the interrelated web of semantic and stylistic interrelationships. Phraseological units may play a considerable role in organization of discourse, providing continuity across its various parts. The thread of phraseological meaning persists from one segment of discourse to another as the semantic process is continued and the discourse unfolds. The discoursal web is enabled by the very nature of the phraseological unit – cohesion of the base form.
Embodiment	This is an exploration how people's subjective, felt experiences of their bodies in action provide part of the fundamental grounding for human cognition and language (Gibbs, 2006). It is an embodied approach (posture, gestures, facial expressions, gaze), which conveys bodily sensations. Language and thought are inextricably shaped by embodied action.
Extended phraseological metaphor	This is a stylistic technique, involving a sub-image or a string of sub-images sustained and tied together by the base metaphor of the phraseological unit, creating a cohesive network of associative metaphorical bonds. Extended metaphor defines as an entrenched figurative pattern and a way of thinking. New stylistic instantiations emerge as a manifestation of the human imaginative process on the basis of existing stylistic techniques. In the cognitive stylistic view, extended metaphor forms a stylistic pattern of both thought and language that is stored in the long-term memory of the language user. Instantiation of extended metaphor is a cognitive process that reflects extended metaphorical thought. It is an extension of the metaphorical image (for more on extended phraseological metaphor see Naciscione, 2010, pp. 79–90; 2016, p. 264).

Figurative network	In an extended metaphor, all the metaphorical sub-images form a figurative network, metonymically linked to the base metaphor by associations of contiguity. Extended metaphor displays an enormous potential in extension of metaphorical thought in figurative conceptualizations, creating sustained figurative networks (Naciscione, 2016, p. 252).
Instantiation	This is a stylistic realization in discourse; it is a particular instance of a unique stylistic application of a phraseological unit in discourse resulting in significant changes in its form and meaning determined by the thought and the context (Naciscione, 2010, p. 252).
Instantial stylistic use	Stylistic use explores experience far beyond the possibilities of standard use, constituting a boundless resource for the writer's or speaker's creativity. The textual forms are created for a particular purpose, namely, to achieve a novel stylistic effect in discourse. They are creative stylistic instances of naturally occurring phraseological units in discourse.
Multimodal discourse	This is a type of discourse that applies stylistic techniques from more than one semiotic mode of expression. The verbal works together with the non-verbal in construction of new meaning in metaphorical and metonymic conceptualizations, revealing patterns of thought that may be manifest in different semiotic representations. These include an embodied approach (posture, gestures, facial expressions, gaze) in conveying bodily sensations, as well as the potential of semiotic elements in constructing figurative meaning (color, symbols, photomontage and the layout of the visual). Thus, multimodal representation is a special type of discourse, exploring semantic, stylistic, semiotic and psychological elements to achieve social, political or economic ends.
Phraseological allusion	This is a mental implicit verbal or visual reference to the image of a phraseological unit represented in discourse by one or more explicit image-bearing constituents, and their instantial ties, hinting at the image. Allusion shows the strength of cohesion inherent in the phraseological unit: one or more constituents are in a position to evoke associations with the whole unit. The explicit image-bearing constituents of the phraseological unit have a metonymic function; they act like a recall cue alluding to the base form, providing a web of associative links.
Phraseological pun	An instantial technique where two interpretations can be assigned to the case of use in the same context: direct and figurative. The salient feature of this technique is juxtaposition and contradistinction of the figurative meaning of the phraseological unit and the literal meaning of a constituent or constituents. As phraseological units are figurative, cohesive combinations of words, every figurative constituent invariably has a literal meaning at the same time.
Phraseological unit	I hold that the phraseological unit is a stable, cohesive combination of words with a fully or partially figurative meaning (Naciscione, 2001, p. 20; 2010, p. 8). A phraseological unit is not a stylistic void. The figurative meaning of the base form of a phraseological unit may be based on metaphor, metonymy, hyperbole, understatement, allusion, euphemism, or their combinations (Naciscione, 2010, pp. 36–38).

Stylistic technique	A mental stylistic device, a set of common rules of use in discourse. Each stylistic technique is characterised by a number of formal and semantic features which are compulsory for new instantiations designed on its basis. These typified techniques are elements of the language system, which can be reproduced, the same as phraseological units in their base forms. Stylistic techniques are part of the mental lexicon, stored in the long-term memory of the language user. They are characterized by stability across centuries. New inimitable instantial forms are constantly generated in accordance with existing phraseological units and language patterns.
Sub-image	This is an extension of the image of a phraseological unit in a direct way or through other sub-images. These sub-images become part of the associative metaphorical network, created and sustained on the basis of the image of the phraseological unit.
Sustainability of a phraseological image	Sustainability of a phraseological image in discourse is its spread over a length of text in sequential segments as part of the interrelated web of the discourse. Instantial stylistic use is sustainable; it contributes to creation of coherence and cohesion in discourse. A phraseological unit may extend across sentence boundaries and even larger stretches of text, creating continuity, a network of unique interrelationships of figurative and direct meanings, and associative links. Sustained stylistic use reflects extended figurative thought and contributes to perception of the text as a cohesive and coherent entity.
Visual discourse	This is a coherent visual representation of stylistic use with the aim of creating a visual narrative. In visual discourse the phraseological image is evoked pictorially with or without a verbal text, and cohesion of phraseological meaning is retained.
Visual pun	One of the most common features in multimodal discourse is the use of visual pun, which invariably emerges as a result of using a metaphor in text and a visual representation of the corresponding literal meaning.
Visual representation	This is a non-verbal mode of expression to be perceived by sight. A visual expression of the text usually goes together with the verbal. Comprehension relies on the tie between the visual and the verbal.

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“Born from the heart”

Social uses of pictorial and multimodal metaphors in picture books on adoption

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This paper explores the adoption narratives that run across a selection of children’s picture books and how they are built through the creative integration of linguistic and pictorial patterns, specifically as depicted in metaphors. The main aim is thus to uncover the way in which adoption is shaped and portrayed in these books, challenging constrictive and learnt discourses in society. The project draws on the four pictorial categories identified in Forceville (1996): contextual or MP1, hybrid or MP2, simile, and verbo-pictorial, as well as the concept of multimodal metaphor (Forceville and Urios-Aparisi, 2009) already suggested in the verbo-pictorial category. These narratives create an accessible space for children to delineate their understanding of families and construct their own identity.

Keywords: adoption, children’s picture books, pictorial and multimodal metaphors, stylistics

[H]ow impressionable and vulnerable we are in the face of a story, particularly a children’s [...] The problem of a single story is this. It robs people of dignity. It makes our recognition of our equal humanity difficult, it emphasizes how we are different, rather than how we are similar [...] However stories can also be used to *empower* and to *humanize* [...] Stories can also repair that broken dignity.
(Chimamanda Adichi, *Ted Talk*, *emphasis added*)

Introduction

This paper examines the visual and multimodal metaphorical representation of child adoption in a sample of stories in six picture books.¹ The opening quote

1. Kasza ([1982] 1992), Sansone and Marks (1999), Höjer and Höjer ([2000] 2001), Kimpton and Beardshaw (2006), Seeney and Fuller (2012), and Serrano and Serrano (2013).

makes reference to an inspiring talk by the acclaimed Nigerian writer Chimamanda Adichie in relation to the role and the value of stories, and delivered within the scheme of *TED*-talks. Her talk in fact embraces the underlying goal of this paper: enriching our understanding of the concept of “family” under a plurality of voices and experiences. The quote selected to open this chapter illustrates the key idea throughout her talk “the danger of a single story” and, conversely, the empowering and humanizing value of a diversity of stories to voice different experiences, positive and/or negative, individual and/or collective, broadening boundaries, questioning single readings, and celebrating diversity. Every word and example in her speech is meaningful to portray the relationship between stories and the framing of human identity, but for the purpose of this paper, I here highlight:

1. “The danger of a single story”, which “flattens *our* experience and [...] overlooks the many other stories that form *us*” (Adichie: 2009). That is, the value of not having just *one* story about a sensitive topic, such as adoption, but a plurality of them, to allow for different perspectives and identities.
2. The relationship between the stories we read and those stories we write; which strengthens the need to voice as many realities as possible that could mirror or expand and develop the potential reader’s context and identity.
3. The vulnerability of children as readers, which urges adults to take special care in the embracing of children’s books that celebrate diversity so that every child can recognize and develop a bit of himself/herself in them, as well as of those who surround him/her.
4. The enlightening role of stories, which expand our “default position” towards people, ideas, and places.

If a single story diminishes our identity and self, if we conceive and create according to the story/stories we hear, if children are an especially vulnerable audience, and if stories are a way into a more understanding and open society, picture books on families should then aim at the most comprehensive range of stories possible. In this way, children, their target audience, do not receive and assimilate a single story of families but an enriched “default position”, which will allow them to enhance their critical self and conceive different patterns of families.

This paper specifically analyses the role of visual/pictorial and multimodal metaphors (Forceville, 1996, 2006; Forceville & Urios-Aparisi, 2009) and other narrative features in story-telling, specifically focusing on child adoption as depicted in picture books targeted to early age readers, from 3 to 8 years old. Following Gibbs (1994), Simpson (2004, p. 42) highlights the value of metaphors as “basic schemes by which people conceptualize their experience and their external world”. This paper aims at studying the basic schemes built through the specific visual/pictorial and verbo-pictorial metaphorical mappings that seem to be favored in

these narratives on adoption; i.e., the metaphorical strategies which seem to ultimately encourage an enriched understanding of the child's own identity and external world, developing a conceptualization of families that embraces diversity.

Research on child adoption has been mainly conducted by scholars from the field of psychology. Amongst them, pointing at the role of books to create narratives, Jerome and Sweeney (2014, p. 681) highlight that "research analyzing children's books on adoption is lacking", and this is a situation that does not answer the demand of the number of children books that address this sensitive issue. Their analysis of the representation of birth parents in a tagged corpus of 104 picture books proves that there exists a limited portrayal of birth parents, based on ideas of rejection, abandonment, a culture of poverty, value-based responsibility and choice, as opposed to a perception based on structural reasons for child placement linked to education, employment or assistance difficulties. This *single story* of birth parents, reinforced in the media and sensational accounts, consequently, leads to a stigmatization of adoption, and child placement.

Therefore, there seems to be a need to have a close look at the way in which adoption is linguistically and visually construed. This paper explores creativity as a result of the interaction between the affordances of visual and multimodal metaphors in the stories (Hidalgo-Downing, 2015; Hidalgo-Downing et al., 2016). The analysis lays emphasis on the social uses (Jones, 2010) of these metaphors, on which the stories seem to often draw so as to frame, reshape, and challenge our schemas of adoption and families. These books consequently create a narrative space for (adopted) children to discuss their own experiences and frame their identity:

most work in the language and creativity paradigm has primarily emphasized the formal aspects of language in use and has only dealt secondarily with the ways language as it is used in situated social contexts helps to create new kinds of identities, social practices and relationships of power. (Jones, 2010, p. 467)

Framed in the area of stylistics and multimodality, the analysis of pictorial and multimodal metaphors in this sample of books will lead us to a better understanding of the representation of adoption, from the viewpoint of the three main participants/voices in the process: adoptive parents, birth parents, and adoptive children; as well as the public voices that surround them. This work thus offers an insight into the depiction of adoption, parenthood and identity in creative language and visuals, registering both positive and negative attitudes, as encoded through the integration of textual and visual modes, shaping what can be understood as a discourse of adoption.

To see how the metaphors function, I will draw on Forceville's (1996) fourfold distinction, which is here used as a meaningful tool to explore how identity problems related to child adoption are presented visually in children's books. Following

an explanation of the framework and the sample object of study, case studies of each subtype of pictorial metaphor and of the verbo-pictorial multimodal type are presented. The aim is to uncover the way they contribute towards a specific portrayal of adoption, discussing likewise those cases in which the taxonomy might not apply, but still offers a revealing starting point to understand how pictures work in these adoption narratives.

Standpoint

Forceville's (1996) framework identifies four types of pictorial metaphors: MP1 or Contextual, MP2 or Hybrid, Simile, and Verbo-Pictorial. MP1 and MP2 are the original names with which Forceville (1994, 1996, 2007) refers to, respectively, those metaphors with one (contextual) or two (hybrid) pictorially present terms. The Verbo-Pictorial subtype is revisited in Forceville (2008a, 2008b) as one subtype of multimodal metaphor rather than a subtype of pictorial/visual metaphor. Verbo-pictorial metaphors characterize advertisements and billboards, due to the inherent nature of this medium, and are framed in the combination of the textual and visual mode: "the usual situation is a visual target that is metaphorically transformed by a verbal, written source" (Forceville, 2008b, p. 195). Moreover, Forceville (2008a, 2008b, p. 183), on the basis of Van Rompay (2005), adds another category to the pictorial metaphor framework, the integrated metaphor, which allows for the description of metaphors in 3D objects in which the form and layout of the portrayed object elicits something else. This last category is thus not pertinent for the present analysis that focuses on a sample of printed visuals and written language. Even though the model points at three sub-types of pictorial metaphors (contextual, hybrid and simile), it likewise allows space for the overlapping of categories, as it is usually the case that one type can exhibit characteristics of others. The following is an overview of each category in the scheme.

Both contextual and hybrid metaphors offer a partial and/or suggested representation of either source or target domains, or both, combined in a single element. Contextual metaphors involve the deliberate fusion or merging of two separate elements in a single one, framing a kind of "collage",² whereby the (visually present) target is placed in an unexpected context that cues the (visually absent) source. On some occasions, it can work the other way around, source domain being the visually represented element and target domain the visually suggested.

2. Forceville uses the term "collage" in a course in "Pictorial and Multimodal Metaphors" for the Semiotic Institute Online (Forceville, 2007): <https://semioticon.com/sio/courses/pictorial-multimodal-metaphor/> [Last accessed, 31/07/2018]

In the case of hybrid metaphors, the combination of two elements results in an impossible entity. Here, the physical integrity of at least one of the elements is altered, and it is not possible to “disentangle” them as they are a single *gestalt* (Forceville, 2016, p. 247). This sub-type of pictorial metaphor illustrates how some pictorial categories may be preferred or discarded in a discourse. As such, the associations of a hybrid might be non-desirable to advertise a product as they might feature the product as an impossible entity, as something “damaged” or manipulated,³ though alternatively it could be a powerful strategy to for instance depict the equivalent competitor’s product. Forceville (2000, pp. 51–52) corroborates this hypothesis in an analysis of pictorial metaphors in a corpus of computer advertisements, in which only a few of them were of the MP2/hybrid type since reflecting a product as the merging of two different things may reflect badly on the (integrity of) the product. This paper will explore the specific use of a depicted impossible entity as applied to the discourse of adoption; as well as consider other patterns of use throughout the other sub-types.

The simile subtype of pictorial metaphors emerges when “various aspects of resemblance” (Forceville, 1996, p. 137) encourage the mapping of features from a source domain onto a target domain. Both entities are nicely placed next to each other against a background, not altering their physical nature. The link results from juxtaposing two elements that are somehow similar or become similar through the simile relation, so that the placement, side by side, and the shared characteristics, invite the viewer to interpret one in terms of the other, to draw a comparison in which A is understood as B. The comparison is visually grounded via “juxtaposing target and source, by presenting them in the same form or posture, by depicting them with the same attention-drawing color or in the same (deviant) style, by lighting them identically ... – or by any combination of these” (Forceville, 2016, p. 247). In the analysis of adoption narratives, the way in which the reader is prompted to compare and understand A in terms of B adds a vehicle of a different nature, a less physical trace, since it draws on the feelings and emotions of the depicted juxtaposed characters, as will be explained later.

These are in a way novel similes in that they show a different portrayal of families, encouraging the reader to understand them only upon the affective bond. This is a new connection that would require, according to Moder (2008, p. 302) and following Gentner and Bowdle (2001), “the cognitive comparison process entailed in structural alignment” rather than the drawing process from a formerly stored category in what would be an attributive predicate. They thus have a re-shaping cognitive role and could be understood as novel and more or less broad in

3. Idea included in the course mentioned in previous footnote.

their semantic and pragmatic scope depending on how explicit the quality of the mapping feature is delivered (Moder, 2008, pp. 312–316).

In relation to this framework, a key distinction lies between monomodal versus multimodal metaphors (Forceville, 2006, p. 383; Forceville, 2017, p. 27). The former refers to those metaphors in which the target and source domain are entirely or mainly delineated through one mode. Conversely, in the latter, anticipated as mentioned in Forceville's (1996) verbo-pictorial subtype, the target and source domains are each entirely or mainly delineated through different modes (Forceville, 1996, 2006, p. 383); a feature which makes both modes necessary for the construal of the domains and the resulting metaphorical mapping. Multimodal metaphors thus result from target and source domains that are shaped and processed only through the interaction of at least two modes -verbal, visual, aural, sound, smell, touch, taste, ...- in such a way that the recognition of the former derives in a series of connotations, determined by discursive elements such as the context and the addressee/s, which are subsequently applied to the latter in a process of creation of meaning (Forceville & Urios Aparisi, 2009; Hidalgo et al., 2016, p. 145).

Due to the inherent written and visual nature of Picture Books, each medium allowing for or "affording" some modes but not others (Forceville, 2016, p. 245), the multimodal metaphors discussed in the analysis are of a verbo-pictorial character, built in the interaction of both textual and visual modes. Nonetheless, mention should be made to the role that other modes such as spoken language, and maybe sound, gestures and/or touch could play in the multimodal construal of these metaphorical representations as an adult reader reads/performs the book to a child.

This paper focuses on those metaphors in which the visual mode is involved, either on its own (visual/pictorial metaphors), or in combination with the textual mode (verbo-pictorial metaphors), contributing to enhance the role of metaphors built through "signaling systems" or modes other than those resulting from only "verbal manifestations". As argued by Forceville, "a full-blown theory of metaphor cannot be based on its verbal manifestations alone, since this may result in a biased view of what constitutes a metaphor" (Forceville, 2006, p. 381); a view that would lose sight of the fact that "the systematicity of human metaphorizing" is based on cognition, and not exclusively linked to language (Forceville, 2016, p. 242).

In relation to pictorial metaphors – in either of the three varieties, the analysis will likewise consider the extent to which the textual mode may perform other meaningful functions, such as contributing to the delineation of the domains, interpreting the projected features or zooming in and out characteristics that may be more or less visually salient. Forceville (1996, p. 115) refers to this role of the verbal element or context as "anchoring".

The process of analyzing pictorial metaphors here comprises the three main steps identified as key in Forceville (1996, p. 108; 2002, pp. 2–3), namely the

identification and justification of: the two terms of the metaphor; distinguishing which one is the target and which is the source domain; and, finally, the features mapped from source to target. Identifying source and target domain in pictorial metaphors is determined by “the wider pictorial-cum-verbal context” as well as an awareness of the genre in which these metaphors occur, as the visual mode lacks the hints of linearity and other grammatical cues that define the “paradigmatic verbal ‘A IS B’” (Forceville, 1996, p. 111). The context is for instance essential in a contextual metaphor to recover a visually absent source domain, which is otherwise only contextually cued. In relation to “feature transfer”, the principle of relevance theory (Sperber and Wilson, 1986) and the resulting assumption that the addresser aims at being optimally relevant, are of key importance to assess the features that are projected from source to target domain, and the resulting interpretation of the metaphor (Forceville, 1996, pp. 108–109 and p. 111; Romero and Soria, 2014).

Although the analysis focuses on Forceville’s (1996) framework, it will also draw from other linguistic frameworks so as to offer a comprehensive description of the metaphors at play and their interpretation in association with adoption. These other concepts include multimodality (Kress & Van Leeuwen, 2006; Nørgaard, 2014), Speech and Thought presentation (Leech & Short, 1981; Short, 1996; Semino et al., 2004), Politeness Theory (Brown & Levinson, 1987) and Transitivity (Halliday, 1985; Halliday & Matthiessen, 2004).

Sample of texts

The sample of texts object of study was selected according to the following criteria: (i) their genre, picture books on child adoption written for a target audience ranging from 3 to 8 years old; (ii) their creative character, distinguishing creative narratives from self-help books, life-story books (Rees, 2009, p. 11), or adoption guides; (iii) the voicing of the three participant roles in the process of adoption: adoptive children, adoptive parents, and birth parents, as well as the net of secondary voices that surround them; (iv) the language, English language, though Sansone and Marks (1999) and Höjer and Höjer (2001) are translations into English from, respectively, German and Swedish,⁴ and finally (v) the repeated themes running through the stories, like the child’s search for his mother. The sample includes the following picture books:

4. This feature is acknowledged in a future contrastive research in relation to the way the discourse of adoption is framed across languages, possibly mirroring how different cultures categorize the world.

- a. *A Mother for Choco* (Kasza [1982] 1992). It tells the story of Choco, a little bird, a nestling, who lives alone and decides to set off to meet his mother. During his journey, he interacts with several adult animals. The story portrays challenging adult voices around the child and offers an understanding of parenthood not determined by genealogy.
- b. *A Safe Place for Rufus* (Seeney & Fuller, 2012) presents the story of the cat Rufus upon his arrival to his new home and the troubles to settle down with his new family, until he finds his place.
- c. *Born from the Heart* (Serrano & Serrano, 2013) is a story of love, which guides the adoptive parents to their child, a love that is represented in a swollen heart.
- d. *The Little Green Goose* (Sansone & Marks, 1999; translation by J. Alison James), like *A Mother for Choco*, narrates the story of a baby animal, a little green goose, who sets off to find his mother, and undergoes an identity crisis likewise determined by lack of corporeal similitude to his caregivers.
- e. *Heart of Mine* (Höjer & Höjer, 2001) presents a couple longing for a child, a child who grows in their hearts and thoughts, and takes a journey to “the other end of the world” to meet her and bring her home.
- f. *The Lamb-a-roo* (Kimpton & Beardshaw, 2006) features a kangaroo who longs to be a mother and a lamb who longs for a mum. They are very pleased to find each other, although the lamb starts worrying about not being able to jump like his family, as well as not looking like them.
- g. *What’s in Your Tummy Mummy* (Lloyd, 2007) tells the story of a child wondering about her mummy’s growing belly after she claims to have a “lovely surprise” within. It is designed as an interactive book with pieces that fold and unfold uncovering possible surprises within the mummy’s belly.

Case studies of each subtype of pictorial metaphor

The analysis is divided into four sections devoted to the role that pictorial contextual, hybrid and simile-type, and verbo-pictorial multimodal metaphors play in these adoption narratives.

1. The Contextual Metaphor: A “collage” of good memories and bonds

Two examples of contextual metaphors are discussed in this section. The first one represents the adopted child’s settling in a new home; the second one confronts the role of the affective and physical bond in adoption, placing the essence of adoption on the former but likewise providing a physical representation of the bond between the adopted child and adoptive parents.

1.1 *Settling in a new home*

The contextual metaphor is the pictorial strategy upon which the main idea in the story *A Safe Place for Rufus* (Seeney & Fuller, 2012) is encoded, namely the well-being of the protagonist Rufus when he finally feels at ease in his new home and overcomes a tough struggle to settle down.

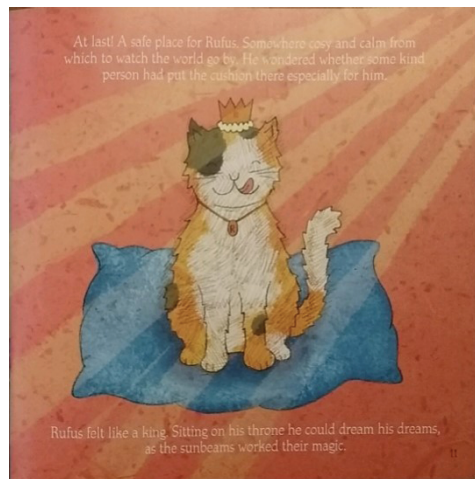


Figure 1. RUFUS IS A KING, Seeney and Fuller, 2012 ©

The “collage” in Figure 1 includes the storyline’s protagonist, the adopted cat Rufus -the visually represented target domain- and the elements that cue the visual context of a King with a crown on his throne -the verbo-visually cued source domain. This is an association that enables the reader to metaphorically understand Rufus in terms of a King; a metaphorical link that could be phrased as RUFUS IS A KING, and thus includes a recurrent source domain in children’s literature, the scenarios of queens and kings, princesses and princes. The source domain is here construed through the visually present crown, the blue cushion, and the red necklace, with the cat Rufus replacing an otherwise probably expected king; a depiction of Rufus standing tall and pleased. Other elements that prompt this royal portrayal include the sunbeams that illuminate the key and central element in the picture. The mapping features [+royalty, +control, +security, +uniqueness, +ownership] are all applied to this place in which Rufus can finally relax and enjoy. The portrayal of a smiley face and licking tongue reinforces the representation of contentedness. The metaphor RUFUS IS A KING involves likewise the underlying metaphor of ANIMALS ARE PEOPLE, which Forceville highlights as ignored by readers in the context of fables due to its commonness and the reader embracing Coleridge’s “willing

suspension of disbelief”;⁵ whereby Rufus is [+human]. Here, it could be argued that children might be more likely to embrace fantasy or imagination, allowing not clearly defined boundaries in the process of categorization. Finally, and essential to the storyline, there is a secondary metaphor THE CUSHION IS A THRONE, which maps the characteristics [+royal, +significant], and symbolizes Rufus’ comfort in his new home.

The text that frames Figure 1 reinforces these metaphorical links.

- (1) At last! A safe place for Rufus. Somewhere cosy and calm from which to watch the world go by. He wondered whether some kind person had put the *cushion* there especially for him.
[Illustration]
Rufus felt like a *king*. Sitting on his *throne* he could dream his dreams, as the sunbeams worked their magic.
[emphasis added]

In (1), the words *king* and *throne*, in italics, explicitly refer, respectively, to one of the elements in the simile relationship “Rufus felt like a king”, and the source domain in the metaphor THE CUSHION IS A THRONE. Thus, the metaphorical visual representation RUFUS IS A KING is here textually turned into a simile. In the same fragment, the word *cushion*, one of the target domains, is also a contextual element that contributes to the delineation of the broader source domain of royalty. The cushion/throne in itself is textually defined as “a safe place for Rufus”, the title of the book; a place which is [+cosy, +calm] and possibly [+tailored] for him. It could be argued that this level of explicitness is necessary to secure the target audience’s, i.e. the child’s, understanding of the storyline since they might have more difficulties to figure out the visual representation, the metaphorical link and the resulting mapped features. It would then be a case of monomodal metaphor reinforced, probably due to the particularity of the genre, through the written language.

Figure 1 is repeated or partially repeated three other times throughout the story. Since the association has already been built, only small visual hints of it are necessary in the other examples to cue the metaphor and the resulting positive semantic prosody (Louw, 1993) that evolves around the depicted place. Forceville (2016, p. 250) refers to metaphors built on time-based discourses, as opposed to static metaphors, for those metaphors in which target, source and (potential) mappings are not necessarily forced to be construed and cued “in one glance” but allow for sequential prompting. It seems that metaphors in picture books could

5. Course in “Pictorial and Multimodal Metaphors” for the Semiotic Institute Online (Forceville, 2007): <https://semioticon.com/sio/courses/pictorial-multimodal-metaphor/> [Last accessed, 31/07/2018]

borrow some features of time-based discourses. In the example discussed, and even though the metaphor is established as a static one, in the fashion in which monomodal metaphors tend to be, it is at the same time when repeated in the story, on the one hand, progressively reducing the number of visually depicted contextual cues necessary to construe the source domain; and, on the other, built up by reiterating its underlining message and establishing other associations.

1.2 *The affective and physical bond*

The contextual metaphor is likewise used to reinforce both a physical and affective representation of adoption and provide a newly framed physical depiction of giving birth whereby the child is born from the parents' heart in comparison to the mother's womb; a corporeal location which likewise allows to reinforce the adoptive parents' love and longing for their expected child. Thus, Figure 2, taken from Höjer & Höjer [2000] (2001), represents the adopted child growing within a heart, the target domain, which strongly cues the context of two source domains: a tree and a womb.

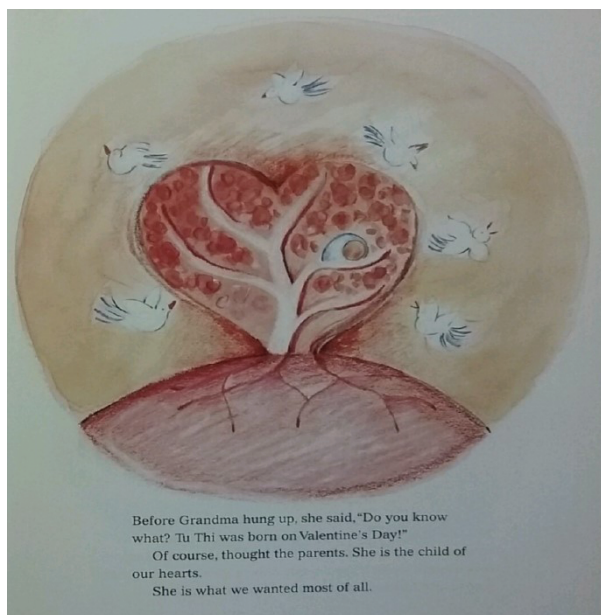


Figure 2. A HEART IS A WOMB, AN ARTERY IS AN UMBILICAL CORD, A HEART IS A (FAMILY) TREE, AN ARTERY IS A TREE BRANCH, A CELL IS A FRUIT.

The resulting contextual metaphors are A HEART IS A FAMILY TREE and A HEART IS A WOMB, which in turn, and respectively, lead to the following secondary metaphors: on the one hand, A HEART ARTERY IS A TREE BRANCH and A CELL IS A

FRUIT; on the other hand, AN ARTERY IS AN UMBILICAL CORD. Figure 2 could also be understood as a blend, showing both a heart and a family tree. In this example, the metaphors are based on heart metonymies whereby the heart stands for the body and the body for the person; body parts prototypically activating metonymic relations. The conventional metaphor A HEART IS (LOCATION OF) LOVE likewise justifies the selection of this target domain to locate the baby.

The richness of Figure 2 derives from the construction of two source domains: the tree – nature-, and the womb, through the double role of the represented elements: (i) branches in a tree or blood vessels (ii) the roots in the field or veins. Here, the doves surrounding the heart that reinforce the link with nature and the small red circles, against a clearer red background, could be interpreted as either fruits in the tree or cells in the heart. The warm colors used likewise suggest a space of cosiness.

The associations in Figure 2 are likewise strengthened through its interplay with other illustrations in the story, such as Figure 3, which is the first illustration in the story and represents the baby in her mother's womb, as the text explains: "Once a little girl grew in her mommy's belly in a land far away".

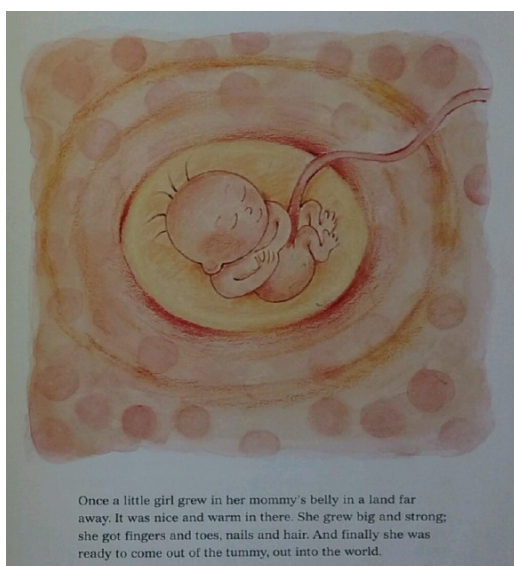


Figure 3. Representation of the baby in the womb © Höjer & Höjer [2000] (2001)

Both Figures, 2 and 3, share the following two main features: red circles surrounding the baby, which reinforce the idea of cells, and a yellow circular background, which frames the baby in a kind of amniotic fluid that surrounds the foetus. Finally, the umbilical cord in Figure 3 could be associated with the blood vessels/branches in Figure 2.

2. Hybrid relations: Physical resemblance does not equal parenthood

The use of incongruity and humor play a major role in the sample of texts on adoption and the shaping of the adopted child's identity beyond physical resemblance. These educational pictures show the incongruity of aiming at physical alikeness and losing some of the features that define us, which are here represented as physical traces, which in fact adorn and characterize the person who holds them.

I here discuss two examples of hybrid relations used in Kasza (1992) and Kimpton and Beardshaw (2006), as respectively shown in Figures 4 and 5 below. Though the authors may be unaware of it, an intertextual connection could be said to exist between both picture books as they make use of the same strategy to show the inadequacy of altering a person's identity, to prove that belonging is not dependent upon physical resemblance, and to celebrate diversity within a family. A dialogue is thus established between these illustrations, which reinforces the idea of a recurrent net of textual and visual resources framing a discourse of adoption.

Figure 4 is taken from *A Mother for Choco*, which narrates the story of the little bird Choco who, distraught by his loneliness, sets off to find his mother; an adventure in which he is repetitively turned down by Mrs. Giraffe, Mrs. Penguin, and Mrs. Walrus on account of its wings, its big round cheeks, and its striped feet. These are moments that are visually depicted as unfulfilled/unsuccessful similes or mapping attempts (see Section 3 for details).



Figure 4. MRS. BEAR IS A BIRD [Picture on right-hand side] BIRD [CHOCO] IS BEAR [Picture on left-hand side. See Section 3] © Kasza, 1992

The cruelty and rejection of the voices that surround the little bird is here highlighted through the use of direct speech (Leech & Short, 1981 and Short, 1996), which enables us to empathize with the perspective of each character. An omniscient narrator here gives up the control of its narration so as to present the exact

words of the little bird (2) as well as the voices of the adults who reject him, whose answers can be classified in a scale of (un)awareness of the little bird's positive face (Brown & Levinson, 1987): from the diminishing devices used by Mrs. Giraffe in the form of apology (3), to the answer of Mrs. Walrus (4) encoded in two imperatives. The frequent reference to Choco as *little* in the text highlights his age and vulnerability and enhances the impoliteness of the addresser's messages. It is the integration of visual and textual modes that allows showing, while at the same time challenging, these discourses of otherness.

(2) "Are you my mother?"

(3) "I'm sorry" [...] "But I don't have wings like you"

(4) "Now look, I don't have striped feet like you, so don't bother me!"

Likewise, the narrator's reporting clauses, (5) versus (6), also reinforce how the message should be understood. I would argue reporting clauses are especially meaningful in children's literature, where the target audience might have less awareness of a message's tone and encoded meanings and might need a more explicit reference to its precise attitudinal value. We may imagine an adult reader imitating Mrs. Giraffe's and Mrs. Walrus' speech while sighing or pretending a grumpy voice:

(5) "sighed Mrs. Giraffe"

(6) "grumped Mrs. Walrus"

Mrs. Bear offers Choco to be his mother, but he is surprised about her suggestion since they look physically different. Choco's surprise thus proves the negative impact of learnt oppressive discourses; in fact, he repeats exactly the same list of physical features that the other animals used to back up their rejection. Figure 4 [right-hand side] is a case of an "imagined" hybrid pictorial metaphor, in which Mrs. Bear pictures what she would look like if she happened to have all those features, resulting in a partial depiction of both domains: MRS. BEAR IS A BIRD. This "imagined" pictorial hybrid consequently gives the reader visual access to Mrs. Bear's thoughts. The position of the illustration in the page, slightly higher than the depicted Mrs. Bear and Choco on the left-hand side, emphasize the fact that this is an imagined scenario.

Despite the humorous nature of Figure 4 [right-hand side], which is textually reinforced through the words *funny*, repeated twice, and the use of expressions showing tenderness like *my goodness*, we could argue that this is an example of high-modality (Kress & Van Leeuwen, 2006; Nørgaard, 2014). The represented scene is quite similar to what it would look like if we were there. The three "birdy"

physical features are neatly applied/imposed on top of the “beary” – or what is categorized as “beary” – inherent nature of Mrs. Bear to prove its incongruity, so absurd that it becomes humorous. The reported indirect thought “Choco thought it was funny, too” equally points at the comforting effect of Mrs. Bear’s discourse on Choco. As for the way in which we are positioned in relation to the depicted hybrid Mrs. Bear, the viewers are invited or offered to take part in the scene (Kress & Van Leeuwen, 2006; Nørgaard, 2014). Mrs. Bear meanwhile takes a look down at her body, shrugs as if having difficulty to fit in, in a vulnerable fashion, frontal angle and close-shot which draws the viewer’s attention to her discomfort.

Moreover, the hybrid representation of Mrs. Bear is confronted against the picture on the left-hand side (Figure 4), which resembles the simile-type relationship, A BIRD [CHOCO] IS A BEAR, as will be discussed in the next section. The impossibility of hybridity is thus solved through the possibility of the simile, Choco’s possibility to understand himself in terms of the parental adoptive figure of Mrs. Bear.

Two other examples of a hybrid relation linked to adoption and the perception of physical difference and belonging are shown in Figure 5, included in the book *The Lamb-a-roo*. The first hybrid, on the left-hand side, in relation to the Kangaroo, THE KANGAROO IS A LAMB; the second hybrid, on the right-hand side, in relation to the lamb, THE LAMB IS A KANGAROO, as both characters decide to change their physical appearance, in an attempt to resemble each other.



Figure 5. KANGAROO IS LAMB [Picture on left-hand side]

LAMB IS KANGAROO [Picture on right-hand side]

© Kimpton and Beardshaw (2006)

Both characters cry for the loss of each other’s identity, for the features that they both cherished and lost in their effort to look alike, the warm pouch of the

Kangaroo or the soft feet of the lamb. Here again, the use of the reporting clause and the repetition of the verb *cry* points at the feelings of the characters, visually represented in the falling tears, which a blue bird observes from below – drawing our attention to them. This is emphasized through the vector line and the rhyming of color (Kress & Van Leeuwen, 2006). We may imagine again an adult reader describing the illustration to a child, pointing at the different elements in the picture, like the tiny bird witnessing the scene with wide-open eyes and being watered by the lamb's tears; or the two butterflies which are also sharing this moment. Moreover, these secondary characters, which are not mentioned in the textual mode, could be argued to lessen the toughness of the portrayed scenario, accompanying the child through it. Linked to the multimodal nature of the book, the role of the adult reader, and the use of humor to deal with dramatic situations, we can see the rhyming use of the word *maa*, which echoes the lamb's bleating, and it is likewise the way he calls his mother.

Both characters are staring at each other, seeing each other at the same level, but placed on two different sides of the book enhancing their distance, which results from losing their idiosyncratic essence. The springs enable the lamb to jump like his mum, but they are defined through a set of adjectives that shade the term with a negative semantic prosody [+big, +twisted, +sharp], and in fact prevent him from fitting into his mum's pouch; at the same time, his mum is covered in thick white wool just like him, but he cannot see his soft brown fur as a result. This hybrid relation is later solved, as in the example in Figure 4, through a simile (Figure 7).

3. Simile-type relations: A celebration of the self and affection

Simile-type pictorial associations play a major role in the construction of identity in picture books on adoption. They are normally arranged, first, in a series of frustrated similes, representing a rejection based on lack of physical appearance and the genetic bond, which in the end leads to a successful simile, celebrating both shared features without denying physical difference and thus the affective bond between parents and (adoptive) children.

In these contrastive associations of similitude, the child is in the end able to understand himself/herself in terms of the parental figure, allowing for the metaphors BIRD [CHOCO] IS BEAR (Figure 4; left-hand side), LAMB IS KANGAROO (Figure 7), and DINOSAUR [THE LITTLE GREEN GOOSE] IS GOOSE (Figure 9 and Figure 10), representing the moment in which the adoptive child settles in his/her family and celebrates this part of his/her identity.

The journey to finally reach this celebration of the self and turning points in the story is signed through former hybrid relations (see Section 2) or unsuccessful

similes, respectively, the hybrid relations: KANGAROO IS LAMB (Figure 5, left-hand side), LAMB IS KANGAROO (Figure 5 right-hand side), and the unsuccessful similes: BIRD [CHOCO] IS (NOT) A WALRUS (Figure 6) and DINOSAUR [THE LITTLE GREEN GOOSE] IS (NOT) LIZARD (Figure 8). In terms of the suggested and rejected associations in the unfulfilled similes in *The Little Green Goose* and *the Lamb-a-roo*, they do not work since the adult participant refuses the child's desire of "seeing himself/herself as B". This is the visual way in which these voices are echoed; voices that the adopted child might have to face and which create the conflict and tension in the narration. The confrontation and the negation that derives from these voices that surround the child is textually emphasized as will be later discussed.

The message or morale conveyed in these contrastive relations between hybrid and/or unsuccessful similes, on the one hand, and successful similes, on the other, is the embracing and celebration of idiosyncratic physical features, as different as they may be from each other, and the enhancing of parental relations based on affection and love.

A series of unsuccessful similes summarizes Choco's previous failures in the search for his mother: BIRD [CHOCO] IS (NOT) A GIRAFFE, BIRD [CHOCO] IS (NOT) A PENGUIN AND BIRD [CHOCO] IS (NOT) A WALRUS. As an example, Figure 6 shows one of these unfulfilled simile-type relations.

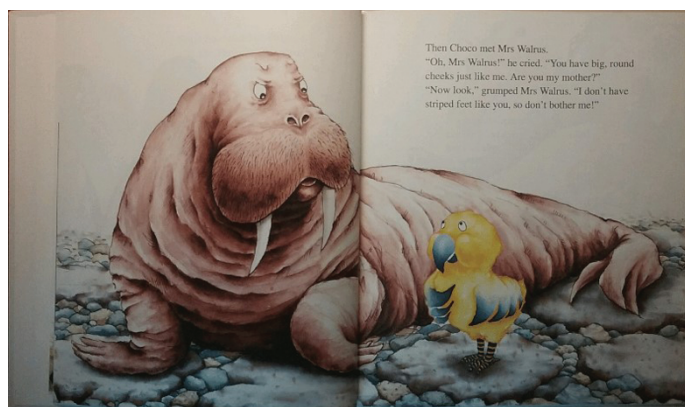


Figure 6. BIRD [CHOCO] IS (NOT) A WALRUS © Kasza, 1992

As mentioned in Section 2 [number (4)], the use of direct speech to reproduce Choco's and Mrs. Walrus' words highlights the vulnerability of the former and the impolite rejection of the latter despite her superiority in terms of age and position, as well as the sensitivity of the topic discussed.

However, these former failed comparisons are confronted by a successful simile-type relation in Figure 4 [left-hand side] to sign the moment in which Choco finds his mother and identifies himself with her due to their mutual affection, and

despite their physical difference: BIRD [CHOCO] IS BEAR. Choco is here understood as the target domain as the story evolves around his own search for his mother. Both characters feature in a front position, sharing a significant closeness, which underlines the conceptual metaphor INTIMACY IS (PHYSICAL) PROXIMITY. We can only see their faces, leaning on each other, Mrs. Bear's big smile, Choco's lifted rounded cheeks, and their eyes closed with contentedness – very much in the nature of the previous protagonist the Cat Rufus.

In the same way, Figure 7 is an example of a successful pictorial simile-type, which leads us to understand one entity in terms of the other, A LAMB IS A KANGAROO, with the underlying metaphor associating animals with humans: A LAMB IS A CHILD (in contrast with A SHEEP IS AN ADULT) and A KANGAROO IS AN ADULT HUMAN.



Figure 7. LAMB IS KANGAROO © Kimpton and Beardshaw (2006)

The simile is again presented as a solution to former hybrid relations (Figure 5 [left-hand side] and Figure 5 [right-hand side]), a fulfilled comparison which arises when both characters understand the ir/relevance of physical appearance, irrelevant to their identification as mother and child, relevant to the features that they treasure from each other. Also in contrast to Figure 4, we notice how the characters are no longer isolated on two separate sides of the spread sheet and one of the Kangaroo's foot is already on the left-hand side of the scene.

The *verbal* text plays a major role to foreground that this is a successful comparison in which the child is at ease with her/his identity. We see how the lamb, the key participant, is the first one to get rid of his disguise, which was depriving him from his identity. His mum follows him. Both are agents of the material processes *pulled off* and *threw away* that point at the moment in which both characters remove their disguise encouraged by the same reasoning: “so they both looked like

themselves again”. This simile is reinforced throughout the book, which presents portrayals of the kangaroo and the lamb in tender situations of mutual affection, like the front cover. It is likewise textually encoded in the neologism *The Lamb-a-roo*, used in both the title and closing of the story, embracing the identity of the lamb as both a lamb – in the first place- and a kangaroo, a successful “hybrid” this time, since it celebrates a plural identity.

The next set of illustrations, Figures 8, 9 and 10, portraying the little green goose, perfectly illustrates the integration of text and image to convey meaning. The adult reader can notice that the word *goose* refers to what is in our schema knowledge categorized as a “dinosaur”, and that the adjective *little* is used to qualify him in terms of age, but not so much in terms of size! *Green* is thus the only adjective that alludes to his physical appearance. This challenge to categorization could be argued to support the insignificant role of physical appearance in the depiction of family and belonging, highlighting the fact that categories are concepts that are artificially created by society to frame our understanding of the world.

As in *A Mother for Choco*, the Little Green Goose’ search for his mother is visually depicted in a progression of unsuccessful similes: THE LITTLE GREEN GOOSE IS (NOT) A FROG, THE LITTLE GREEN GOOSE IS (NOT) A FISH, and THE LITTLE GREEN GOOSE IS (NOT) A LIZARD, as he is rejected by the animals he thought could be his mother due to their shared physical features, respectively, a fat green frog, a fish with glistening green scales, and a lizard with a long tail. The use of free direct speech shows the correspondence between the oppressive voices of the chicks and The Little Green Goose’s words and ideas (7). The lack of reporting clauses draws the reader into the intense conversation, echoing a probably fast exchange of words. The chicks negate the child’s identity, the fact that he can see himself in terms of his father, “You are not a real goose” or “Mr. Goose can’t be your real mother”, due to a list of physical traces.

- (7) “You are not a real goose!”
 “No you aren’t!”
 “Yes I am! Mr. Goose is my mother.”
 “Not true! Look at yourself!
 You have no feathers or beak,
 you have no wings, and
 you’re all green. Mr. Goose
 can’t be your real mother.”

Figure 8 is an example of one of these frustrated similes: THE LITTLE GREEN GOOSE IS (NOT) A LIZARD. The two characters are here placed next to each other, with shared physical resemblance, cuing that the Little Green Goose should be understood in terms of the lizard. This association is nonetheless negated in the text on

the grounds of an underlying genetic understanding of parenthood. Visually, the participants do not touch each other, and despite the Little Green Goose features with open arms and an attempt to get closer to the lizard, the latter is presented in a more static fashion.

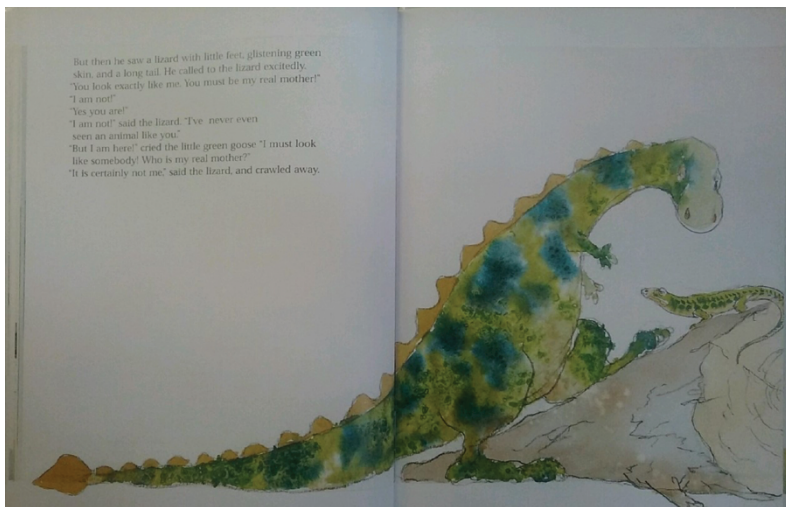


Figure 8. DINOSAUR [THE LITTLE GREEN GOOSE] IS (NOT) LIZARD © Sansone and Marks, 1999

In the dialogue, we can identify the non-preferred collocation *real mother* (Quiroz, 2008), as in (7), which is here framed echoing societal voices of otherness as a checklist of physical resemblance: little feet, green skin and long tail. Epistemic modality (Quereda, 1997, pp. 186–206; Downing and Locke, [1992] (2006, pp. 379–398); Jeffries and McIntyre, 2010, pp. 77–84) is likewise a key element in the text in the form of the high logical possibility *must* upon which The Little Green Goose expresses the hypothesis of belonging to the lizard (8) or the need to belong to someone (9), and the lizard’s rejection of this hypothesis through the modal adverbial *certainly* (10).

(8) “You look exactly like me. You must be my real mother!”

(9) “I must look like somebody”

(10) “It is certainly not me”

Figure 9 and Figure 10 are different visual realizations of the same fulfilled simile: DINOSAUR [THE LITTLE GREEN GOOSE] IS GOOSE. Even though physical likeness decreases in comparison to the characters in Figure 8, the illustration challenges the role of the genetic bond offering a stronger link, the affective bond between the

participants. The representation of Mr. Goose embracing the little green goose, as well as the words in the text, foreground their union and, as a consequence, the simile. Here, we can highlight the words *fondly* and *contented*, describing respectively the behavior of father and son. Likewise, the material process *tucked* and verbal process *whisper*, which represents the little green goose as actor and sayer, reflect the final feeling of acceptance and belonging beyond physical likeness, reinforcing the harmony that encourages a reciprocal mirroring in each other.

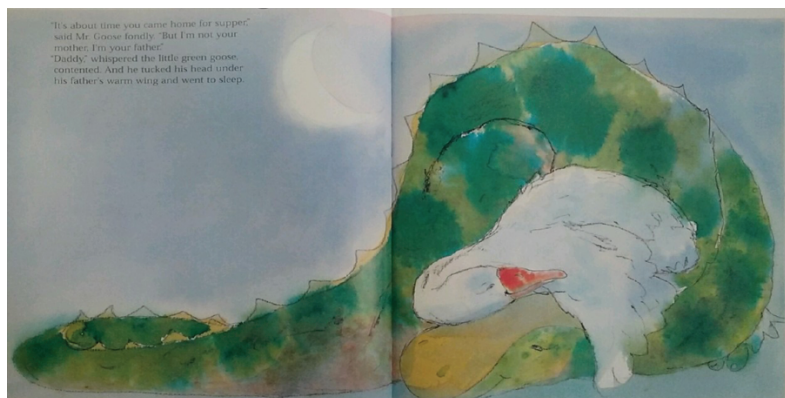


Figure 9. DINOSAUR [THE LITTLE GREEN GOOSE] IS GOOSE (1) © Sansone and Marks, 1999

The simile is further reinforced in Figure 10, which shows the footprints of Mr. Goose and The Little Green Goose, understanding one in terms of the other, walking together in life, with the underlying metaphor *LIFE IS A JOURNEY*. Probably since it has already been built in Figure 9, the relation of similitude is more abstractly depicted here, where the footprints metonymically point at the protagonists.



Figure 10. DINOSAUR [THE LITTLE GREEN GOOSE] IS GOOSE (2) © Sansone and Marks, 1999

The verbal mode achieved a prominent role in the discussion of both fulfilled and unfulfilled similes, with opposing semantic fields, affection and desire characterizing the former, versus physical appearance, negation, and uncertainty defining the latter (Calvo-Maturana, 2012 and forthcoming). The role of the textual mode highlights that relations of otherness are mainly a human construction encoded in the language, which is visually and textually confronted in the stories. The following section discusses verbo-pictorial metaphors in the stories, in which source and target domains are each predominantly built through different modes.

4. Verbo-pictorial metaphor: Born from the heart

This section examines the verbo-pictorial metaphor that underlines the main message in the stories *Born from the heart* and *Heart of Mine: A HEART IS A WOMB*. The particularity of this metaphor (Figure 11) lies in the fact that the verbal mode “Born from the heart” is essential so as to cue the source domain “womb”, while the visual mode, with a growing heart in the woman’s torso, highlights the mapping features between source and target domain.



Figure 11. Born from the heart © Serrano Vreugde, 2013

According to the standard Western reading orientation, from left to right, the reader is likely to read the title “Born from the heart” and subsequently see the picture, activating a metaphorical mapping in which the heart borrows the following features from the source domain “womb” [+swollen, +pregnant], and becomes both the physical site of the genetic birth of the child as well as the metaphorical and metonymic site of the love for the child. As Forceville (2008b, p. 195) highlights, “we are used to verbal explanations of pictures” such as captions, and as a consequence intuitively read the text surrounding a picture as complementing it with further information or an explanation. Graphology likewise achieves an

important role as the letters “from the” lead to the visually depicted heart, which is later also explicitly stated in the text.

The metaphorical link hinted through this multimodal interplay is extended in the storyline, in which the doctor announces the protagonists, Rose and Charlie, that they will be parents upon noticing a light in Rosa’s heart; a heart that grows every day, resulting in the mum not fitting in her clothes, and finally bursts with happiness at the exact moment they meet their child.

Locating the child’s birth in the mum’s heart has a meaningful value since lack of physical connection, as showed in the previous sections, seems to be one of the concerns in the determination of belonging between adoptive parents and children. Moreover, the play with the metaphorical site of the “emotion” love is essential in the discourse of adoption in which love and longing are represented as the moving engines of adoptive parents.

Figure 12 is the book cover of *What’s in your tummy, Mummy?* (Lloyd, 2007), which depicts the physical changes of the female character as her belly grows and her child tries to uncover what is inside it. Each page features both characters in a repeated conversational pattern, narrated from the child’s viewpoint, which reproduces their conversation after his mum exclaims, “There’s a lovely surprise inside my tummy!” An interactive book, the mum’s belly unfolds in each page to show, according to the child’s guesses (which run parallel to the belly’s size): a flea, an octopus, a chimpanzee, a horse, or a dinosaur.

The link between child and mother in Figure 12 is reinforced through the mirroring fashion of the two juxtaposed figures, both characters leaning back, with

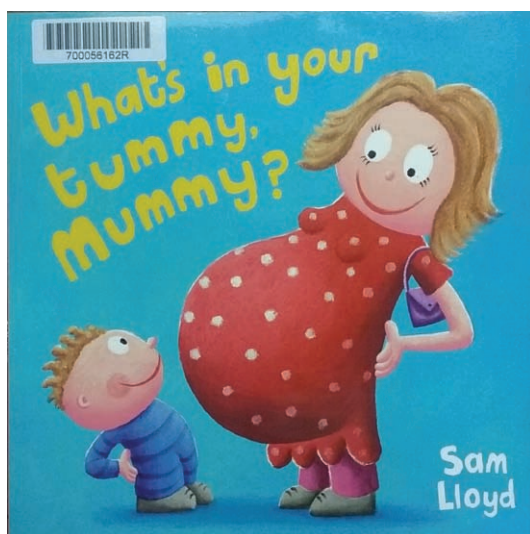


Figure 12. © Lloyd, 2007

prominent bellies, and their arms akimbo; as well as the vector line which shows how mum and child look into each other's eyes.

A simile-type pictorial metaphor could be established between Figure 11 and Figure 12, built across books and time, in which the reader is encouraged to understand the swollen heart in terms of the swollen belly, and metonymically, one mother in terms of the other. The mirroring of both figures is favored by the lateral position of both represented women and the prominent body part in their trunk. In this sense, location and context play a major role to cue the source domain "womb" if we consider Figure 11 in isolation. Figure 12 may respond to our default schemata knowledge of pregnancy and explains in contrast the power of the message in Figure 11, which allows for an enriched appreciation and visualization of pregnancy and motherhood.

The same metaphor A HEART IS A WOMB likewise runs through *Heart of Mine*, discussed in Figure 2 as a case of monomodal contextual metaphor, showing that different pictorial strategies are used across and within the stories so as to cue the same domains, resulting in similar metaphorical links. Figure 13, also taken from *Heart of Mine* (Höjer & Höjer, 2001), and previous to Figure 2 in the story, features the adoptive parents positioned in a hearty fashion, looking and holding each other, with two intensely red hearts and a bigger white one that emanates from them and embraces their child.

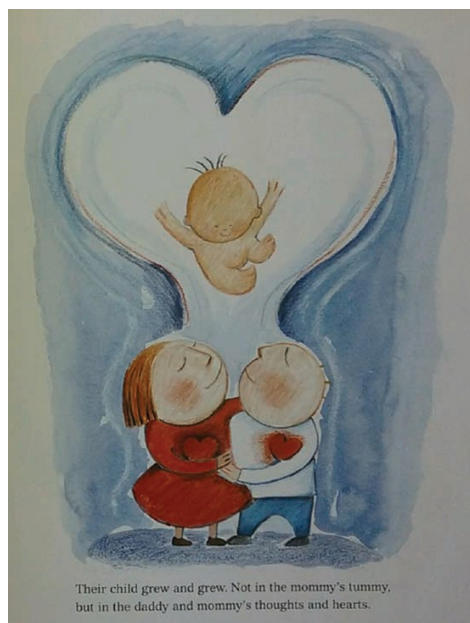


Figure 13. A HEART IS A TUMMY [WOMB] A THOUGHT IS A TUMMY [WOMB] © Höjer & Höjer [2000] (2001)

The text below the illustration explicitly highlights the contrast “tummy” vs. “thoughts”/ “hearts”: “The child grew and grew. Not in the mommy’s tummy, but in the daddy and mommy’s thoughts and hearts” highlighting the shared quality [+ able to swell], a progression encoded in the repetition of the word “grew” and echoing the time period of pregnancy. By combining both image and text, the metaphor becomes multimodal, once the story has been read from beginning to end.

The key participant, the child, is placed frontally, whereas the parents are placed sideways and facing each other. The representation of the swollen heart differs from the one in Figure 11 as it here grows from the union of both, adoptive mum and dad. We could argue that this is an example of low or mid modality, giving a physical representation of the adoptive parents’ love and feelings, whereas modality in Figure 11 is higher, closer to what it would look like if we were witnessing the scene. This is achieved through the strong parallelism established between the two body parts, heart and belly. The union of both parents is likewise represented in the use of colors, the father’s white t-shirt rhyming in color with the heart-shaped space that surrounds and protects the baby – and points to the adoptive parents- and the mother’s dress visually rhyming with the intense red color of their hearts. The heart-shape space can likewise suggest a comics book text or thought balloon, visually representing the adoptive parents’ thoughts.

Discussion

The storylines in *A Mother for Choco* (Kasza, 1992), *The Little Green Goose* (Sansone & Marks, 1999), *Heart of Mine* (Höjer & Höjer, 2001), *The Lamb-a-roo* (Kimpton & Beardshaw, 2006), and *Born From the Heart* (Serrano & Serrano, 2013) allow for a space in which physical resemblance is not a prerequisite to define parenthood. Nonetheless, the birth of the (adoptive) child is in a physical element, the heart. Consequently, the heart functions as a metonymic symbol of the parent’s love, and its metaphorical site, a corporal part that compares with a belly through the mapped features [+ able to swell progressively, + origin and home for the foetus] and gives rise to the metaphor A HEART IS A WOMB, represented through contextual and verbo-pictorial strategies.

The construal of pictorial metaphors in the stories is sometimes determined by the time-based features of their discourse. Despite those pictorial metaphors analyzed are generally construed at a sight, in the static way that characterizes monomodal metaphors, the progression of the story allows to (i) strengthen and enrich previous metaphors through contrastive relationships amongst pictures, or (ii) reduce the contextual cues of the source domain in those cases in which the exact pictorial metaphor is repeated and established. For instance, the above

mentioned metaphor A HEART IS A WOMB is reinforced through the comparison of Figure 3 – depicting a baby in a womb- and Figure 2 – featuring the same baby in the womb within a heart, establishing connections with the placenta, umbilical cord and cells as source domains.

A subcategory of simile-type pictorial metaphors was identified in the analysis. This is a sort of “unsuccessful/unfulfilled simile” in which two entities are placed together, and whereas the shared features prompt us to understand one in terms of the other, it is the underlying genetic understanding of parenthood, textually encoded, that denies the association. The progression from a succession of unsuccessful similes into a successful simile enables to voice and challenge voices of otherness, and to offer a visual representation of the child’s search for his/her father/mother.

Functioning in a similar way to “unfulfilled similes”, the three instances of a hybrid discussed in the analysis are all unhappy ones. The incongruity arising from it is here used as a humoristic vehicle to deal with the dramatic situation associated with a belonging crisis. As in those cases of unsuccessful similes in the texts, the depiction of these hybrid impossible entities leads to successful similes, in which the characters embrace their physical difference. In this way, the successful simile-type is used to solve the conflict and visually represent a stronger bond through affection. Love, acceptance, and shared ideas are thus the features that enable the child to understand himself/herself in terms of the parental figure, despite the checklist of physical resemblance decreases.

The same progression and similar strategic choices of pictorial metaphors have thus been noticed in the narration of three pictures books on adoption in the stories: *The Little Green Goose* (Sansone and Marks, 1999), *A Mother for Choco* (Kasza, 1992), and *The Lamb-a-roo* (Kimpton, 2006). Despite the strong intertextual connections amongst these three books, the origin of the conflict that arises due to physical difference varies in each case. Whereas external voices reject the protagonists in *The Little Green Goose* and *A Mother for Choco*, the *Lamb-a-roo* portrays an inner conflict when the lamb is aware of the external differences between himself and his family. Moreover, in *The Little Green Goose*, a pictorial fulfilled simile-type results from a series of frustrated former similes; however, it is a hybrid relation that is solved through a fulfilled simile-type in *The Lamb-a-roo*. Finally, in *A Mother for Choco*, both a progression of unsuccessful similes and an “imagined hybrid” are strategically used to highlight the incongruity of discourses of otherness leading to a final fulfilled simile.

Conclusion

The fact that we have found visual and multimodal patterns across different picture books encourages us to think that there is a *discourse of adoption* running across and within cultures and genres. This paper has argued for the existence of a pattern in the use of some categories of pictorial metaphors (Forceville, 1996) in relation to the way adoption is framed in picture books. On some other occasions, pictorial metaphors have been the springboard from which to identify other types of associations that seem idiosyncratic to adoption discourse, such as the use of incongruity through the depiction of entities close to a hybrid. These are educational pictures with the ultimate goal of (re-)shaping and framing our understanding of “adoption” while challenging discourses of otherness.

This paper has argued that there seems to be a systematic use of the pictorial and multimodal metaphors in these adoption narratives according to their role to (i) define adoption through longing and love, providing a likewise physical and metonymic site for this love (contextual and verbo-pictorial metaphors); (ii) explain abstract feelings like settling in a new home, via source domains which are accessible to the target audience as the context of kings and queens (contextual metaphor); (iii) echo but at the same time challenge restrictive voices in society (unsuccessful/unfulfilled simile-type); (iv) show the incongruity of a discourse of otherness based on genealogy (hybrid relations) and (v) underline affection and love as the moving engines of adoption, defining a plural identity and highlighting a turning point in the stories in which the child can finally see himself/herself in terms of the parental figure, a moment of celebration of the self and fulfillment (successful/fulfilled similes-type).

The multimodal metaphors discussed were all of the verbo-pictorial sub-type due to the nature of the sample object of study. The anchoring role of the textual mode has proved to be meaningful throughout the discussion of monomodal pictorial metaphors to secure the understanding of the target audience. The textual context proves likewise to be of value to strengthen the progression from unfulfilled to fulfilled simile-type with a semantic field of physical appearance, negation and uncertainty characterizing the former, versus one of affection and desire defining the latter. Multimodality is key to render source and target domains in the metaphor *A HEART IS A WOMB*.

To conclude, and coming back to Chimamanda Adichí's talk, this paper has ultimately aimed at showing the value of picture books to “empower” children and offer them, as well as the adult reader, an understanding of families built upon the celebration of diversity and affection.

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Figuring it out

Old modes and new codes for multimodality, technology and creative performativity in 21st century India

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Satya Nadella, Vikram Chandra and Manjul Bhargava, three public figures of Indian origin, have recently suggested that significant similarities exist between the creative processes involved in writing poetry and in producing computer codes. This paper explores some of the consequences of drawing on unfamiliar 'non-western' cultural traditions to augment current theories of creativity, coding and performativity. More specifically, it examines the premise that 'creativity' relies on an able grasp of rules, extends to a risk-taking capacity to break these very rules and, sometimes, to combine them with other embodied modes such as music and dance. The chapter argues that this premise is investigated in Indian treatises from Bharata to Nagojibhatta, who may have been early advocates of multimodality in the pre-modern world.

Keywords: compositionality, coding, metaphor, Indian cultural traditions and rasa theory, inference, performance

1. Introduction: "Coding teaches us how to think"

A good measure of the impact of technological revolutions is their capacity to foster new modes of thought. Just as the Gutenberg print era once 'democratized' Europe (Goody, 1986) and provided a key condition for the rise of genres like the novel, a crucial question now arises: Will the current e-technologies similarly generate 21st century textual, creative and educational styles of thought, new 'selfies of the mind', so to speak?

The Internet trinity of Steve Jobs, Bill Gates and Mark Zuckerberg all agree, as we know, on a simple article of faith. Schoolchildren, college students and most

everybody should learn to code because programming a computer “teaches you how to think”, as Jobs (2013) bluntly put it. However, many cognitive scientists today would argue that countless other forms of human activity such as tying knots on shoelaces, sorting bananas from mangoes, or reading stories also teach us to think. So, what’s so special about coding? Why, if at all, is it so important to understanding the grammar of creativity in a present-day context?

An unusual conversation about such a shared grammatical ‘code’ underpinning the very notion of creativity in our new e-habitats has been initiated, as it happens, by a group of ‘global’ Indians. Satya Nadella, CEO of Microsoft, Manjul Bhargava, a Princeton math professor who won the Fields Medal in 2014 and Vikram Chandra, an Indian novelist and computer programmer who is a professor of creative writing at the University of California, all draw our attention to a unique source of inspiration.

That common resource is the Sanskrit poetic tradition. In this essay, I begin by setting out the premises of my argument, drawing on both classical Indian as well as contemporary Western sources and suggesting that what we loosely call ‘creativity’ involves three key elements that are common to both perspectives. These are: 1. metaphor or, more broadly speaking, analogical thinking; 2. performativity; and 3. emotional arousal. A single cognitive thread, I suggest, binds these elements together. Whether it is a mathematical equation being solved, the movements of a dance or the stanzas of a poem being interpreted, or a metaphor being decoded, each of these acts demands that we actively and cooperatively make inferences from incoming material. Further, when such interpretations are associated with works of art, the process is not devoid of emotion. Continuously storing and connecting conceptual patterns and making new patterns from them – a set of operations that Steve Jobs simply and effectively calls ‘thinking’ – can cause us both pleasure and pain. Thinking in this sense is affective.

We are, in fact, perpetual thinking machines. Humans as a species cannot but think all the time with our bodies and with our minds: when we wave at a friend across the road, when we regret that we did not buy tickets to that film-show which might have given us so much delight because we thought we should conscientiously be marking answer-scripts instead, or even when we are asleep and dreaming, we persistently infer possible consequences and create alternative worlds. Forms of art, I argue, simply intensify and make self-reflexive this basic human tendency to engage in inference making, even when such speculative activity causes us to experience negative emotions such as fear, anxiety or anger. It is this cognitively addictive act of ‘figuring it out’, of decoding figure from ground and vice-versa, that I maintain is common to both computer coding and to poetics, to creative work both in the sciences and in the arts, to verbal language as well as non-verbal

‘embodied’ sign systems, and to the myriad performances we undertake just as much in everyday life as in the abstract ‘metaphoric’ realms of the intellect.

This paper seeks to draw a wide historical and comparative arc linking theory to socio-cultural praxis and older strands in the Indian poetic tradition to interpretations of those ancient contexts within the ‘global’ technological spaces that we inhabit today. It asks whether an understanding of ‘multiculturalism’ as it has long been a structural part of Indian social configurations is at all relevant to an analysis of the current burgeoning forms of ‘multimodality’ (see Nair, 1997, 2002a, 2019, 2020). Specifically, the paper engages with the question of whether theories of creativity rooted in Indian texts of the ancient past and coded via different sets of technologies ranging from carvings on stone to palm leaf manuscripts – to which Nadella (n.d.), Chandra (2014) and Bhargava (2015) make explicit reference – can provide a perspective on the creative explosions fostered by the new communicative e-tools invented over the last few decades and in use across cultures today. I argue, *inter alia*, that India offers an interesting case study in this respect and that decoding ‘Indian’ patterns of thought could offer critical insights into 21st century ‘global’ multimodality.

2. Compositionality and Creativity: ‘Poetry is the best code’

In Sanskrit and in many modern Indian languages, at least three orders of creativity are differentiated. To begin with, there is the idea of *kṛti* or *kriyā*, cognate with the Latin from which the English word ‘create’ is derived. This word simply means ‘to make’ or ‘to act’ in the most general sense and is found self-reflexively embedded even in the word ‘Sanskṛt’, indicating a ‘well-made language.’ The word *ṣṛṣṭi* or *ṣṛjan*, on the other hand, refers to a ‘bringing into being’ and is associated with a more abstract or transcendent creativity, as exemplified in sentences of the sort ‘God created the world.’ Finally, the word for creativity as a human activity in the sense of composing a poem or creating a work of art is *racnā*, discussed in more detail because of its relationship to the key notion of ‘composition.’

Compositionality (the idea that a complex proposition can be broken into constituent parts) and grammaticality (the idea that the constituents of a sentence or proposition can be combined according to rules) have been quite an obsession in India textual traditions for a very long time. Panini’s famous grammar *Aṣṭādhyāyī* (c. 400–600 BC), for instance, is singularly devoted to defining recursive rules and pinning down of the exact phonological, morphological and syntactic components of Sanskrit (see Kiparsky, 1994). Panini wanted to rigorously capture these units in the briefest and most memorable format possible, so

that classical Sanskrit, as distinct from its various spoken ‘dialectal’ versions, could be preserved in its pristine glory.

Interestingly, the central idea of compositional analysis in grammar is also linked, as mentioned, to the idea of creativity in many Indian languages, a fact brought out nicely in the English translation of the commonplace modern Hindi word for being ‘creative’, namely *racnā*. This word translates, more or less exactly, as ‘composition’. Further, just as the English word ‘compose’, derived in its turn from the Latin, does a lot of conceptual heavy lifting – indicating creative ventures such as composing a sonata, affective tasks such as composing oneself mentally, and imaginative efforts to summon up the awful connotations of its semantic antonym ‘decompose’ – so does the word *racnā*.

In short, to be ‘creative’ within this old Sanskrit tradition of grammar and poetics is to compose a new object out of well-defined existing components: a poem from a given set of verbal elements; a symphony from musical notes; a mathematical equation from numbers, the emotion of love from a set of coded performative gestures on stage (see Section 4). The first step in this process, as in most classical traditions, is to learn the rules or codes of composition and acquire a rigorous disciplinary training. To be creative is to be so au fait with the rules that you have the confidence to stretch them to breaking point. Creating ‘new compositions’ within such a traditional milieu is to:

- a. Invest long years in disciplinary training;
- b. Learn the language of a discipline so well that one can engage in a fluent dialogue with the past of that discipline;
- c. Acknowledge past authority, even as you break with it.

The risk within such traditional modes that valorize the past is of course that a new composition may clash with strong, earlier associations that a patterning of elements invokes. For example, if the word ‘darkness’ conventionally connotes the embodied inability to see clearly, then William Styron’s 1989 work *Darkness Visible: A Memoir of Madness* not only harkens back to Milton’s (2003) famous 17th century oxymoron “darkness visible” in *Paradise Lost* depicting the flames of hell that give out no light and yet are unbearably painful, it also requires a metaphoric extension of that phrase to the phenomenon of suicidal depression in the late 20th century. This is that risky ‘stretch’ of metaphor, requiring author and reader to cooperate in a complex inference-making task that tests creativity on both parts by asking each to refer back to in-depth, tacit linguistic knowledge (see Nair, Carter and Toolan, 1988; Nair, 2002b). It also raises the question of how an ancient text, embedded in complex cultural conventions of the past can in fact be satisfactorily interpreted in the present. Let us consider a contemporary case of such a risk-taking ‘translation’ of past into present.

One of the followers of the Pāṇinian tradition mentioned at the top of this section, Nāgojibhaṭṭa, ended his own 18th century grammar with a famous saying. This was *ardhamātralāghavena putrotsavaṃ manyante vaiyākaraṇāḥ*, which means that, “grammarians rejoice over the saving of half a syllable as over the birth of a son” (translation Staal, 2006; see also Staal, 2008). Not only is this sentence revealing of the social mores that prevail to this day in contemporary India where ‘son preference’ is an unpalatable social fact, it also conveys the information, using the analogical tool of metaphor, that brevity is a crucial value in the production of a grammar. These brief gnomic utterances, often called *sūtra* (see Garrett, 1973; Nair, 2003a) are encapsulations of knowledge that typically call up reams of interpretations in the tradition. In Nāgojibhaṭṭa’s case, I want to further argue that his single, pithy sentence embodies all those three elements that I have suggested are necessary, if not sufficient, for an understanding of the phenomenon of creativity: namely, metaphor, performativity and emotion, bound together by an implicit invitation to the reader to infer or decode the meaning of the utterance.

First, consider metaphor, which in its simplest Aristotelian form has the structure or ‘code’: *a* is to *b* as *c* is to *d*. In this instance, this basic code is filled in as follows:

the saving of a syllable is to the grammarian as the birth of a son is to a father

In this instance, a possible further inference is that the father of the putative ‘son’ (biological as well as textual) could be the grammarian himself, leading to further encapsulation and a personal embedding of the ‘meaning’ of the utterance.

Second, bearing in mind that this is the last sentence of a text addressed to an exclusive club of specialist grammarians, the noteworthy rhetorical flourish at the end seems intended to be socially indicative rather than grammatically informative. It is a performative utterance that demands interpretation in a very particular social context where the birth of sons is especially valued. This observation brings me to my most intriguing point.

Third and last, it seems that the metaphoric performativity of Nāgojibhaṭṭa’s sentence is a direct challenge to the reader to go beyond what Paul Grice would call the ‘literal meaning’ of the sentence to its implied or ‘non-natural’ meaning. In this case, that meaning is unequivocally emotive. I want to argue that this is peculiarly apparent from an inferential move that Staal actually makes in his modern translation of a crucial word in the sentence. Staal’s unparalleled competence as a pioneering scholar of Sanskrit is not in doubt, yet he translates Nāgojibhaṭṭa’s main sentential verb *manyante*, which ordinarily means ‘considers’, ‘believes’ or ‘takes to be’ as ‘rejoices’. Why? ‘Rejoices’ is, after all, semantically far removed from ‘considers’; it is an affect verb as surely as ‘considers’ is not. In my analysis, it is exactly such a risk-taking emotive inference that this sentence calls on the

informed reader to make. Staal is in fact a very well informed reader with a vast tacit reservoir of background knowledge about the language he is translating. Recognizing the value accorded to a son's birth within the cultural context in which this language operates, he thus takes the daring risk of actually changing the main verb in his translation.

'Staal's error' here, I would maintain, is no simple translation misstep, nor is it carelessness. Rather, it is an inferential leap to the underlying meaning of Nāgojibhaṭṭa's utterance – which is that 'brevity' is so highly desirable a quality in a grammatical formulation that it deserves the keenest of celebrations. Brevity is no mere technical requirement, it teaches grammarians to care about 'how to think,' à la Steve Jobs, conveying a value within the ambit of a discipline that wins practitioners' admiration and joy. Staal correctly infers this message and thus uses a verb that is semantically incorrect and also puts his personal reputation as a scholarly translator of Sanskrit at stake but correctly conveys the happy excitement around the business of 'saving half a syllable.' Such feelings might have made immediate sense to Nāgojibhaṭṭa's original audience but are less likely to be obvious to a contemporary reader accessing his text in translation. Staal remedies this gap in background knowledge for readers who may know little or nothing of gender evaluations in Nāgojibhaṭṭa's social setting or grammatical nuance in Sanskrit by boldly translating 'considers' as the emotionally arousing 'rejoices'.

Connecting the emphasis on brevity and emotive memorability in old Indian texts such as Nāgojibhaṭṭa's to my broader argument that 'global Indians' involved in e-technologies consider this paradigm especially pertinent when it comes to 'coding creativity,' I now draw attention to a telling comment by Satya Nadella. Nadella, who describes himself as an "avid reader" of Indian poetry, seems implicitly to identify succinctness as a value in programming. In his words (online): "You're trying to take something that can be described in many, many sentences and pages of prose, but you can convert it into a couple lines of poetry and you still get the essence, so it's that compression... the best code is poetry".

Few would dispute the proposition that poetry, a discourse universal found as far as we know, across all human cultures, offers us a paradigm case of 'creativity' for its own sake. Why do such 'codable' or generic linguistic formats exist? Why are they so durable in so many cultures? I have argued elsewhere (Nair, 2003a, 2003b, 2009, 2011a, 2011b, 2014, 2017, 2018) that what we conventionally call the 'creative' forms of language exist not so much because they serve the functional purpose of conveying information but because they are relatively costless ways of 'teaching us how to think.' The risks we take in decoding a poem in all its brevity or, let's say, in going along with a fantastic traveler's tale, are miniscule; yet stories, poems and forays into 'virtual' worlds inexpensively and expertly train us to recognize zones of danger, fear, excitement etc. without actually having to encounter

these complex situations in real life. Nursery rhymes, myths, bogey tales, are used from childhood onwards for what might be called ‘thought drills’, somewhat in the fashion that we learn multiplication tables – part rote, part foundation for later, more abstract modes of thought. That is their value; they are cognitive flight simulators that prepare us for situations that we may later encounter in real life and their brevity is a plus point when it comes to committing to memory what these mental events have to teach us.

Nothing very tangible is lost, on the face of it, if one has never read a poem in one’s life. We would possibly get along perfectly well without either ever having danced or attended a dramatic performance or read a novel. Yet, few of us can resist the temptation to risk time and energy in pursuit of the thrills of ‘figuring it out’ that appear to attend the task of coding the world into virtual patterns. Such an urge to discern what Henry James once called the ‘figure in the carpet’ is at the heart of human creativity (see Section 5).

Computer ‘coders’ or programmers today who can translate this human impulse to take pleasure in inferential processes into video-games that offer gamers inferential choices in terms of entering multimodal ‘future scenarios’ are thus often highly prized and highly paid. Likewise, the skills of ‘spam warlords’ at coding malware are so effective that governments fear and sometimes even employ or arrest them. In such cases, the ability to code and decode also has major real-world consequences. Such experts operate at the limits of our inferential abilities, at the boundaries of minimalist ‘poetry’, where intricate sensory inputs are re-described as coded sequences of zeroes and ones.

Both engineering and re-engineering such codes requires practitioners to necessarily prize economy of expression. The fewer the sequences that a computer programmer needs to solve a coding puzzle, the more elegant he is as a writer of code. It is in this sense that Nadella describes poetry as a model for coding. Both involve ‘creativity’ in the sense of being at ease with the grammar of the ‘language’ used and the ability to grasp what Nadella calls the ‘essence’ of each component in order to re-use it effectively. However, a critical attendant problem is obviously that while a code strives for ‘perfection’ as does a poem, perfect codes no more exist than perfect poems.

Poetry and code are, rather, mental discussion ports where ideas of perfection can be docked. These are processes whereby notions of perfect balance, harmony, elegance, brevity and exactness can be reflected on and experimented with, rather than a collection of perfect objects in and of themselves. That is their contribution to the idea of ‘creativity’. Codes, for example, typically have glitches or ‘software bugs’ that, at their worst, can bring a system crashing down. These essentially human errors come about because a program has logical or ‘syntax’ design flaws or because its source code is badly written; its components are not carefully enough

defined, its operating system faulty and so forth. A poem, likewise, is imperfect because its basic syntax is clumsy, it is badly constructed in terms of where its semantic logic is leading, and its units or components are too loosely aligned. One could say that the inferential systems that poems and codes represent have a requisite inbuilt capacity for error; or to put it more formulaically and briefly: zero errors = zero creativity.

In this sense, whether it is poetry or code, 'creativity' can be thought of as a basic human ability to envisage a series of inferential risks – perhaps taking wrong turns more than once along the way – that, at best, results in the 'aha' moment that several researchers have maintained is critical to understanding why pursuing ideas excites us (see Sternberg, 1999). I will return to this consequential 'Eureka' moment in the last section of this essay.

Psychologists such as Csikszentmihalyi, Torrance, Sternberg (see Sternberg, 1999) interpret creativity somewhat differently, especially the first, who lays particular emphasis on how mind and body work in perfect 'flow' when athletes, dancers and others are at their best. Cognitivists such as Gibbs (2005), Low and Cameron (1999), however, and conceptual blending theorists like Turner (1996) also emphasize 'process' in creative performance.

In this paper, however, in keeping with my thesis about the continuities between a venerable Indian tradition where the rules of composition and the composition of rules were highly regarded and present day developments in the writing of codes as they are viewed by technologists such as Nadella, I also want to reference Margaret Boden (1990, 1999). Boden, both a cognitive and a computer scientist, argues that computer models can help us understand the phenomenon of creativity in human cultures.

Sustained analogical thinking is the type of combinational thinking that is closest to exploratory transformational creativity for both share a concern with conceptual structure. However, analogy focuses on the structure of individual concepts or thoughts, whereas exploratory transformational creativity is grounded in structured conceptual domains or styles of thinking. (1999, p. 357)

This essay examines 'styles of thinking' in the Indian tradition that emphasize the 'connections' between a. analogy or metaphor; b. community performativity aimed at a culturally clued in audience; and c. emotional arousal. I consider each of these elements in greater detail in sections 3 and 4 but here I want to point to one other factor in 'Indian thought' that seems to resonate with Boden's ideas. Boden (1990) maintains that 'transformational creativity' shares common characteristics across the domains of the arts and sciences.

Making the incontrovertible point that every human being is 'psychologically creative' (capable of 'making' or *kriyā*), Boden goes on to argue that it is, however,

only a small subset of people whose creativity is acknowledged by history. These individuals are found across the arts and sciences. Uniting these domains, Boden includes in her list of creative thinkers an eclectic range. She writes: “Shakespeare, Bach, Picasso; Newton, Darwin, Babbitt; Chanel, the Saatchis, Groucho Marx, the Beatles...take your pick. From poets and scientists to advertisers and fashion designers, creativity abounds” (1990, p. 1).

Boden’s list is remarkable for its latitude – but it does not include a single thinker from any other tradition but the western. This is understandable; yet, it is undeniable that such commonality of process is also explicitly lauded in other traditions such as the Indian, which has produced a rich theoretical lexicon for the description of a multimodal, multidisciplinary creativity. For instance, as far back as the 12th century, the Indian mathematician Bhaskara dedicated the first book of his treatise on mathematics to his daughter *Lilāvati* in verses that throughout interwove math problems with emotive love stories and the like. An example:

Whilst making love a necklace broke
 A row of pearls mislaid
 One sixth fell to the floor
 One fifth upon the bed
 The young woman saved one third of them
 One tenth were caught by her lover
 If six pearls remained upon the string
 How many pearls were there altogether?

Bhāskara then writes in his conclusion to *Lilāvati* (1150):

Joy and happiness is indeed ever increasing in this world for those who have *Lilāvati* clasped to their throats, decorated as the members are with neat reduction of fractions, multiplication and involution, pure and perfect as are the solutions, and tasteful as is the speech which is exemplified. (Trans: Colebrooke, 1817)

Here, transformative emotion, metaphoric thought and poetic performance are precisely incorporated within a single ‘style of thinking’. As in most pre-modern cultures, texts of this sort do not strictly demarcate different branches of knowledge. Aesthetics abuts ethics; poetry rubs shoulders with politics and philosophy. Much as with the pre-Socratics (who specifically refer to Indian sources) as well as with Aristotle or Plato, the aim of such texts is at once to present an ideal, decontextualized world of ‘forms’ and describe a present ‘cave’ scenario that is far from ideal and heavily contextualized. The implication is that both an explanation and a critique of the quotidian latter can be generated if one rightly formulates the unseen, transcendent rules that guide the former.

To distill these rules was the aim of all grammar and composition. It is worth noting, in this connection, that a common, often number-based, set of codes is believed to unite the different arts of poetry (*kāvya*), music (*rāga*), drama and dance (*nāṭya*), and mathematics (*ganit*) within the Indian tradition of *rachnā* (composition). Thinkers within this tradition presumed that modes of thought were at once transcendent, contextual and embodied. The simple business of counting within each of these arts was thought to arouse a set of emotions (*rasa*) and this theory lives on today in the ways in which dance, music and song are routinely taught to the young in India, in schools and academies. This is a standard and large-scale way, further explored in Section 4, in which old modes are recursively presented in new environments and creatively interpreted therein. We should also recall here that the word ‘digital’, so widely used in the technological universe today, spawning whole new inter-disciplines such as the ‘Digital Humanities’, also comes from the Latin root for fingers (and toes!) and implies the embodied activity of counting.

The work of the mathematician Manjul Bhargava is a contemporary case in point. Bhargava, who was taught math by his mother as a child and who recently won the prestigious Fields medal, works on the geometry of numbers and draws on an Indian tradition that sought to demonstrate how the rules of poetic composition could be mathematically described. These compositional rules proposed by the Jain scholar Hemachandra (12th century AD) distinguished between ‘heavy’ (*guru*, this word is cognate with the Latin derived English word ‘gravity’) and ‘light’ (*laghu*) syllables and showed how to fit words into the exact patterns of poetry that such rules generated. Bhargava (2015) now ‘reverse engineers’ these syllabic rules for composing Sanskrit poetry in order to explain to his students how complex Fibonacci sequences and other mathematical patterns work.

From Boden and Bhargava, I infer the obvious. Creativity is such a complex, amorphous phenomenon that it is futile to try and postulate a simple ‘operational definition’ for it. The only ‘core’ feature of creativity on which all opposing factions seem to agree, whether they are poets or physicists, mapmakers or mathematicians, is that creative inventions/solutions have an unpredictable *sui generis* quality. They deviate from the rules, creating a novel instance that modifies previous rules. Drawing on various sources, Indian and Western, I present, for starters, a Boden-like list of my own of some of the mental processes that could result in this perception of ‘originality’. In the next two sections, I focus on vi – ix of the putative ‘components of creativity’ listed.

Table 1. Components of creativity

Components of creativity	
<i>Curiosity</i>	Asking why? (Why is the sky blue? Why do apples fall to the earth? What causes pneumonia? Why can't I put things this way instead of that?).
<i>Problematicizing</i>	Creating/spotting opportunities to ask why. (Does the sun revolve round the earth, or vice versa? What are the consequences of building big dams?).
<i>Sticking to your 'creative' hypothesis</i>	Trying to find ways to protect your fragile theory even when it is under fire, until the time it grows big and strong. In short, being stubbornly committed or motivated, persevering, even obsessive (like Galileo).
<i>Finding a language</i>	Searching for or inventing a language in which you can plausibly answer the 'why' question, i.e. evolving a methodology using the language of math, poetry, etc. consistently and persistently. (This is also the 'how?' question. How exactly do you get from x to y, or from the problem to the solution?).
<i>Aestheticizing</i>	Extending one's language/idiom by constantly exploring and critically evaluating the possibilities opened up by it. This goal is sometimes achieved by appealing to classical criteria such as internal harmony, elegance, balance, proportion, etc. (such criteria could apply both to objects like the Taj Mahal or to Euclid's theorems).
<i>Indicating analogies</i>	Making comparisons using metaphors or similes consciously or unconsciously (such as Kekule's 'structure of benzene', allegedly envisioned in a dream).
<i>Taking risks</i>	Being 'foolhardy' by using formal falsehoods or metaphors. That is, by invoking high-risk, rule deviant strategies to arrive at unpredictable answers (like Picasso or Plath).
<i>Randomizing</i>	Combining components in new ways, i.e. deliberately deviating from the 'rules' (for example, telling stories with a surprise ending).
<i>Experiencing</i>	Coming to a 'Eureka!' moment and being able to see the point or significance of an invention. Yay, CREATIVITY!

3. Metaphor and Inference: "I am a riddle in nine syllables"

An original composition, in my view, has three necessary and possibly interrelated features: it must offer a puzzle; it must challenge the conventions of its own

medium; and it must present a pattern or set of patterns, rhythmic, visual, tactile etc. however difficult or ambiguous these may be to decode (see Nair, 2009, for a fuller elaboration of these ideas). As suggested in Sections 1 and 2, these three features are bound together by a 'call to inference'. Aptly titled "Metaphor" the short below by Sylvia Plath (1960) illustrates these characteristics in full measure.

METAPHOR

I'm a riddle in nine syllables,
 An elephant, a ponderous house,
 A melon strolling on two tendrils.
 O red fruit, ivory, fine timbers!
 This loaf's big with its yeasty rising.
 Money's new minted in this fat purse.
 I'm a means, a stage, a cow in calf.
 I've eaten a bag of green apples,
 Boarded a train there's no getting off.

The puzzle

A reader's inferential capacities are challenged from the very start in this poem, which is a striking example of 'embodied creativity' (note that Gibbs, 1994, also mentions this poem). Without the reader's active efforts at decoding the 'riddle' Plath sets, the self-reflexive meaning of the poem cannot be given life. In this sense, the reader is mid-wife here to the birth of linguistic meaning; it is her holistic and relational reading of this 'words-to-world fit' (Searle, 1976) that creatively brings together the several disparate images and references in the poem.

Plath's poem points to a primary creative act in nature that is analogous to the act of poetic creativity. This is the act of giving birth. The poet's own pregnant and gendered body is thus the primary analogical grid to which reference is made throughout in the 'linguistic body' of the poem, bringing nature and culture together within the space of the 'nine syllables' or nine lines of the poem representing both poetic and physical gestation.

The challenge to its own medium

Plath's poem uses language to describe and challenge its own medium – language. The poem constitutes a sophisticated commentary on the idea of 'metaphor' and linguistic concepts are openly invoked in it, such as the riddle and the syllable. Iteration or what Wilson and Sperber (1992) call 'echoic mention' is also freely used so that the poem's lines sometimes refer back to the first person deictic self or 'I' of

the poet and sometimes as to the actual text of the poem. This effects a tantalizing merger of the embodied person of the poet with the material presence of the poem.

Without the recognition that Plath's is a particular sort of cultural artifact, specifically a poem – that is, a linguistic production whose sole purpose is not to give information but rather to produce multiple interpretations and to introduce users of language to the reflexive delights of language – this essential context of language-use is lost and the reader no longer has any interest in exploring the implications of the poem, the intentions of the author or the 'meaning' of its metaphors. If we were to counterfactually imagine a culture that possessed no concept of poetry whatsoever, the prediction would be that they would also not have the conceptual wherewithal to interpret Plath's highly self-reflexive offering – at once a meditation on being 'creative', a commentary on the rules of linguistic genre and an embodied performance.

The engagement with pattern

This is clearly a poem that obsessively arranges and rearranges linguistic elements following that classic, tightly constructed analogical rule for the generation of metaphor – $a : b :: c : d$, mentioned in Section 2. For example:

I am to **you** as a **riddle** is to *language*

I: you :: elephant : animals

I: you :: melon: fruits

I: you :: ponderous house: other dwellings

I am to **other bodies** as a **purse** is to **money**

I: other bodies :: a yeasty loaf : other loaves

I: other bodies :: stage : audience/ stage in life : other stages in life

I: other bodies :: cow: calf

We notice, too, a number of other figures of speech in the poem that pattern it further and invite several other mental acts of decoding (see also Gibbs and Colston, 2007, on this aspect of the use of figurative language in cognitive processes). To mention a few, these include *metonymy* (e.g. the elephant represents the set of large animals, ivory represents the elephant, the melon represents the set of red fruits etc.); *paranomasia* or the *pun* (e.g. "stage" means either a theatrical space or an element of time); *paradox* (I am I but I am 'not I' because I'm all these other things); *hyperbole*; ("I've boarded a train there's no getting off"); and *personification* ("I'm a melon strolling on two tendrils").

Several contemporary theorists within the pragmatics paradigm of 'language in use' have been concerned with the implications of figurative language (Grice, 1975; Davidson, 1984; Levinson, 1983; Wilson and Sperber, 1992; Ricoeur, 1986).

These theorists place metaphor among a group of linguistic tropes that call for a similar sort of inference making. To briefly summarize their positions: Grice suggests that violations of his Maxim of Quality (MQL) which direct conversationalists to, *ceteris paribus*, ‘tell the truth’ serves to identify instances of metaphor, meiosis, hyperbole, irony and other figures of speech. Davidson, in his important philosophical description of metaphor as “the dreamwork of language”, insists that “what distinguishes metaphor is not meaning but use – in this it is like the assertion, hinting, lying, promising, or criticising (p. 259).”

Levinson, considering the broad outlines for a pragmatic theory of metaphor, outlines three requirements: the first is “an account of how any trope or non-literal use of language is recognized” (this is the problem that Grice addresses); the second is “how metaphor is distinguished from other tropes such as, say, irony and understatement” (this is the specific problem I tackle in Nair, 1986); the third is that “the interpretation of metaphor must depend on our general ability to think analogically” (on this cognitivist point, see Lakoff and Johnson’s influential work, 1980; Nair, 2003b, 2011b). Sperber and Wilson (1986) also underline that they

would like to show that irony and a lot of related tropes (eg. meiosis, litotes) fall together within a range of cases [that] are *echoic*...From the pragmatic point of view, what is important is that a speaker can use an echoic utterance to convey a whole range of attitudes and emotions, ranging from outright acceptance and approval to outright rejection and disapproval, and that the recognition of these attitudes and emotions may be crucial to the interpretation process. (p. 237–240)

Sperber and Wilson’s notion of ‘echoic mention’ is important not only because it echoes, so to speak, the views of other pragmaticists that numerous tropes are related, it also specifically states that the “recognition of...attitudes and emotions may be crucial to the interpretation process” (see also, Kovesces, 2003). Extending Sperber and Wilson’s idea to a discussion of the role of longstanding past traditions and their contemporary relevance, we could further argue that ‘echoic mention’ is a mode of reassembling thought patterns or ‘styles of thinking’ from generation to generation, representing continuities, as well as disruptions in, the applications of various ‘rules’. This is evident if we consider the structure of another influential early work, namely *The Rule of Metaphor: Multidisciplinary Studies in the Creation of Meaning in Language* by Paul Ricoeur (1986). Claiming Aristotle as his principle intellectual ancestor, Ricoeur sets up the chapters of his text as a set of tributes to other theoreticians, thus:

Between Rhetoric and Poetics: Aristotle (For Vianney Decarie)
 The Decline of Rhetoric: Tropology (For Gerard Genette)
 Metaphor and the Semantics of Discourse (For Cyrus Hamlin)
 Metaphor & the Semantics of the Word (For Emile Benveniste)

Metaphor and the New Rhetoric (For A. J. Greimas)

The Work of Resemblance (For Mikel Dufrenne)

Metaphor and Reference (For Mircea Eliade)

Metaphor and Philosophical Discourse (For Jean Ladriere)

The rhetorical structure of Ricoeur's critical work, like that of Plath's poem, is clearly self-reflexive. It indicates that it belongs within a European 'style of thinking' where the codes are shared. And yet, the discussion of metaphor is not exhausted by the theoretical explanations offered by any one linguistic perspective. It demands crosstalk between disciplines and seems to illustrate a perspective on metaphor that is essentially dialogic.

As the punning title of Ricoeur's book suggests, metaphor 'rules' and other figures of speech follow and bear a 'family resemblance' (Wittgenstein, 1953) to it. Fathoming the rules of metaphor as the chief rhetorical structure in human languages, it is implied, will enable us to understand the rules that govern other figures of speech. Metaphor, Ricoeur (1986) argues, not only initiates disciplinary dialogue but constitutes the best exemplification of how the interplay between code and message, sentence and word, syntax and semantics, consciousness and context, sense and reference, and naming and predication is persistently renegotiated to extend the boundaries of the human imagination.

In short, almost all current theorists of metaphor seem to subscribe to an underlying premise that directs their ideas of interpreting this trope: namely, that metaphors exist within an interactive context which requires their 'creativity' to be worked out via some kind of communicative contract between speaker and hearers. Since such pragmatic theories take ordinary conversation as the paradigmatic case of communication, every linguistic genre – narrative, poetry, drama – is reflective of the basic alternating ABABAB structure of conversation. This even simpler ABABAB dialogical format, involving fewer components, could underlie the A:B :: C:D algorithm for metaphor (see Nair 2011c).

Within such a structurally simple but infinitely productive structure of ABABAB conversation, the onus thus has to be on interpretation and the burden of 'coding meaning' is as much borne by the listener as the speaker. Even when a fragment of language is constructed as a monologue, as in the Plath (1960) poem, such a theory predicts that there will be a cognitive bias towards seeing it as a dialogue between a speaker/poet and hearer/reader. The physical, embodied nature of the human 'feedback loop' also means that all speakers are forced by the 'rules' not just of culture but of nature to be listeners attending to their own speech even if they are producing 'monologues' (Nair 2020).

This perspective, it turns out, was nicely anticipated in the rules for composing metaphor laid out in the Indian traditions. Levinson suggests that interactive,

pragmatic theories of metaphor must “provide an account of how they are recognized and constructed and the circumstances under which they are used.” (1983, p. 159). So to briefly turn back to the Indian commentaries and discuss ‘circumstances of use’, metaphor in early Indian texts is accounted chief among the set of tropes known as *alankara* (meaning ‘ornament’).

Importantly, the *alankara* or ornament of metaphor here presupposes a ‘body’ and the old Indian texts instruct writers and informed readers that any ornament must be suited to the body that it adorns. If used inappropriately, it can be interpreted as another unintended trope such as irony or *vakrokti*: “For to adorn a corpse with a pearl necklace is not at all beautiful.” Interesting the word for irony, *vakrokti*, literally means the ‘turning away or twisting of speech’, a deviation, in exact parallel to the word ‘trope’ which also means ‘turning away, twisting’. This turning away or twisting of language is what seems to arouse the inference-making instinct. Invoking the abstract idea of a curve, the Sanskrit grammarians tell us that the ornaments of irony, metaphor and so forth adorning the ‘body’ of poetry should resemble “the beautiful curve of the crescent moon and be quite unlike the curve of a dog’s tail” (Mankhaka, *Śrīkaṇṭhacarita* Canto 11).

Moreover, any *alankara*, these texts insist, should only be sparingly used, under special circumstances, i.e. when it has the definite aim of developing a *rasa* (emotion). I will discuss this idea of ‘performing emotion’ (*rasa*) in Section 4. Here, for the purposes of a final illustration, let’s say the emotion or *rasa* to be conveyed is *śṛṅgāra* (love). The Sanskrit grammarians in this case frequently cite the example of Kalidasa’s play *Abhijñāna Śākuntalam* (‘The Recognition of Shakuntala’, circa 500 AD), where the king Duṣyanta’s desire for Shakuntala is indirectly expressed via his envy of a bee, irresistibly attracted, which has mistaken Shakuntala’s face for a lotus and buzzes about her. This metaphor leaves the audience to infer the emotion felt by Duṣyanta. Given this cognitive investment on their part, it is thus judged a far more effective route towards conveying Duṣyanta’s state of mind than having the king directly declare his love for Shakuntala.

In the next section, I examine further how the essential codes for the production of emotion and modes of the reception for these emotions are analyzed in the most basic of Indian texts, namely the *Natyasastra* of Bharata (circa 100 AD) which is still used as a basic instruction manual to teaching dance and drama all across India.

4. Performativity and Emotion: “We want an object of diversion, which must be audible as well as visible”

We now come to the most complicated but central representational code in all of Sanskrit poetics. This is the coding of emotion or *rasa*. Perhaps the earliest reference to *rasa* is in the *Rgveda* (circa 1500 BC), where it refers to the sweet intoxicating juice of the sacred Soma plant, the juices secreted by the body, to essences, as well as to taste – and thus literally drips with tropological significance. *Rasa* then resurfaces as a very heavily theorized textual notion in Bharata’s *Natyasastra*. (circa 100 AD), where the name of the composer ‘Bharata’ is itself playfully broken up in popular folk etymological tradition into a syllabic pattern of components: BHA meaning ‘thought’ + RA denoting ‘feeling’ +TA implying rhythm or pattern. I mentioned a version of these elements as part of my analysis of the Plath (1960) poem “Metaphor”; here, they reoccur in Bharata’s ur-explication of *rasa* as well as the several exegetical texts on Bharata’s work by Ānandavardhana (9th century AD) and Abhinavagupta (10th century AD) and other pre-modern commentators.

Before I go on to present the central concept of *rasa*, I should mention that this concept is so critical in various Asian cultures that it caught the attention of the anthropologist Clifford Geertz (1973), researching Javanese culture where this concept had migrated, as well as those of the cognitive linguists William Croft and Alan Cruse (2004).

Rasa has two primary meanings: ‘feeling’ and ‘meaning’. As ‘feeling’ it is one of the traditional Javanese five senses – seeing, hearing, talking, smelling and feeling, and it includes within itself three aspects of ‘feeling’ that our view of the five senses separates: taste on the tongue, touch on the body, and emotional ‘feeling’ in the ‘heart’, like sadness and happiness. The taste of a banana is its *rasa*; a hunch is a *rasa*, a pain is a *rasa* and so is a passion. As ‘meaning’, *rasa* is applied to words in a letter, in a poem, or even in common speech to indicate the between-the-lines type of indirection and allusive suggestion that is so important in Javanese communication and social intercourse. And it is given the same application to behavioral acts generally: to indicate implicit import, the connotated ‘feeling’ of dance movements, polite gestures etc. But in the second, semantic sense, ‘alternate significance’ – the deepest meaning at which arrives by dint of mystical effort and whose clarification resolves all the ambiguities of mundane existence.

(Geertz, 1973: 134–135)

Croft and Cruse also comment on the uniqueness and untranslatability of this concept:

Basically, understanding the meaning of *rasa* presupposes understanding large portions of Javanese culture and worldview. In frame semantic terms, the concept RASA presupposes a frame consisting of much of Javanese culture... In other words, the reason that words such as *rasa* and German *Bildung* are 'untranslatable' is because of the culture specific character of the frame/ base against which the concept is profiled. Translating *rasa* as *feeling* or *meaning* or *Bildung* as *culture*, approximates the profile of the concept but does not have the same frame at all.

(Croft and Cruse, 2004: p. 21)

Although Geertz and Croft and Cruse attribute the concept of *rasa* to Javanese culture, it originated centuries earlier on the Indian subcontinent and is embedded in the idea of interactive performativity in various drama, dance and poetry genres of the subcontinent to this day. I argue here, following Bharata himself, that this theory of performance actually 'democratizes' communication, at least in theory, since it relies on the theoretical premise that a speech act is a compact between a speaker and a hearer, a performer and an audience. To begin this section, then, a quote from the opening of the *Natyasastra*:

Bharata's Students: "O Brahman, how did the Nātyaveda originate... which you have properly composed? And for whom is it meant, how many limbs does it possess, what is its extent and how is it to be applied? Please speak to us in detail about it all."

Bharata: "...Brahmins, in the days of yore... the gods, with Indra (Mahendra) as their head (approached) Brahman and spoke to him, 'We want an object of diversion, which must be audible as well as visible. As the Vedas are not to be listened to by those born as *śūdras*, be pleased to create another Veda which will belong to all the colour-groups (*varna*)'. 'Let it be so', said he in reply..."

(The *Natyasastra*, Chapter I, Trans. Manmohan Ghosh)

Bharata then goes on to produce an extremely layered account of the relationship between meaning, feeling, and performance. Yet in the best traditions of Indian compositionality, lauding brevity, he too seeks to encapsulate this web of relationships in just a single line of verse. A word for word translation of this verse follows:

<i>Vibhāva</i>	<i>anubhava</i>	<i>vyabhicāri</i>	<i>sanyogāt</i>	<i>rasanishpatti</i>
context	+ experience	+ indirect transitory conditions	unite	[an] emotion to produce

The final emotional product to emerge after a successful performance is what Bharata calls a *sthāyibhāva* or 'stable emotional state of mind'. In other words, he envisages a 'code' for the production of all emotions, through a combination of the three or four compositional elements mentioned in his verse. What are these elements? These are usually glossed, within the explicit context of a dramatic performance, as:

bhāva ('thought': this serves to instill the meaning of the theme of the literary composition in the audience); *vibhāva* ('contextual knowledge': this requires in depth, tacit knowledge, including the ability to produce and interpret verbal utterances and non-verbal gestures within a particular cultural context);

1. *anubhava*, ('experience': this has to be produced in the minds of an audience via dramatic gestures and words; and finally, the
2. *vyabhicāri* emotions (roughly meaning, 'moods' or 'transitory emotions': these may pass through the minds of an audience before they arrive at a stable interpretation; and
3. *sthāyibhāva* (stable representation integrating 'thought' and 'feeling') of the *rasa* being enacted on-stage.

In its constant reiteration and enumeration of components such as those just listed, *rasa* theory is thoroughly set out in the style of a teaching manual with a wealth of examples. If one trawls one way through these, however, a clear picture of the 'grammar of emotions' that Bharata seeks to present comes through – so clear that it can be graphically depicted and, written up as a 'code', as shown in Figures 1–6.

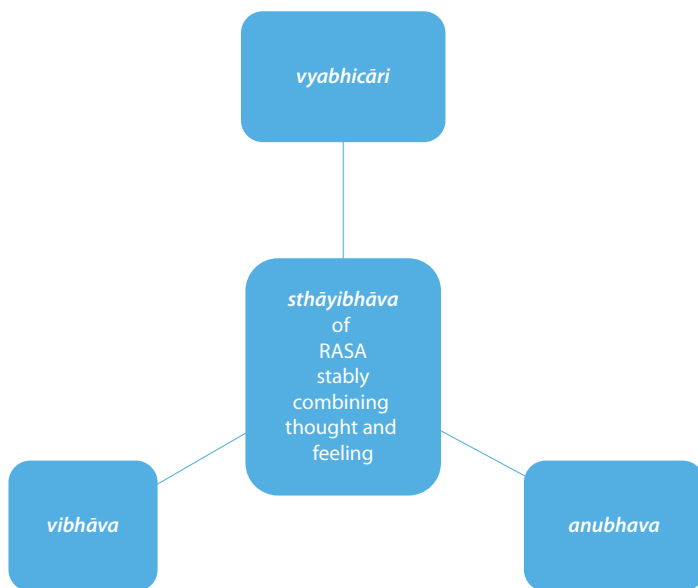


Figure 1. Components that performatively create a *rasa*

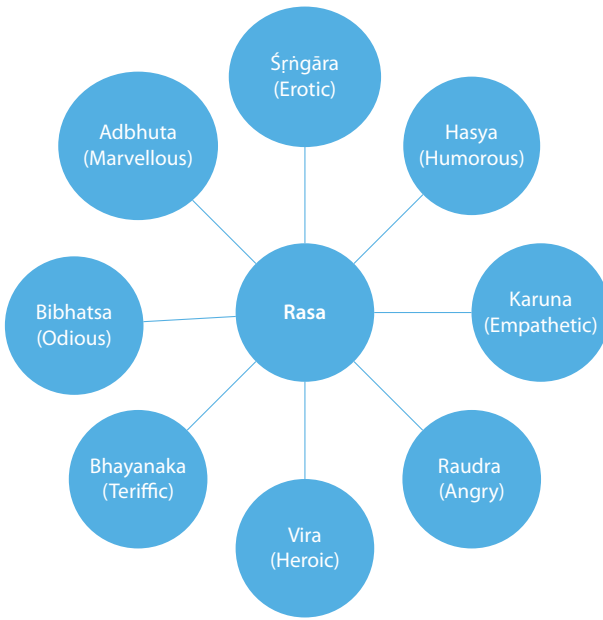


Figure 2. The eight main emotions

As Geertz, Croft and Cruse underscore, *rasa* theory seeks to performatively interlock the apparently discrete terms ‘thought’ (*bhāva*) and ‘emotion’ (*rasa*), until a stable ‘meaning’ emerges. Feelings themselves are subject to change and are irreducibly embodied but the task of a performer is to skillfully compose the elements of her depiction so that the audience (ideally, themselves knowledgeable interpreters known as *rasikas*) can reliably infer a particular emotion and carry away a stable representation (*sthāyibhāva*) of it in their minds. This is far more difficult than it seems because Bharata’s text implicitly acknowledges that *bhāva* and *rasa* are cognitively difficult to tease apart. For example, Figure 3, representing the eight *bhāva* seems to closely resemble Figure I showing the eight *rasa* – but look closely and they are not exactly the same. The subtle ‘puzzle’ that the coder – in this case, the skilled performer – has to solve is reduce the daylight between the two so that they are stably one. Any computational programmer seeking to model the emotions today would understand this problem. The three main types of *bhāva* that contribute to the making of the *rasa* are shown in Figures 3–5.

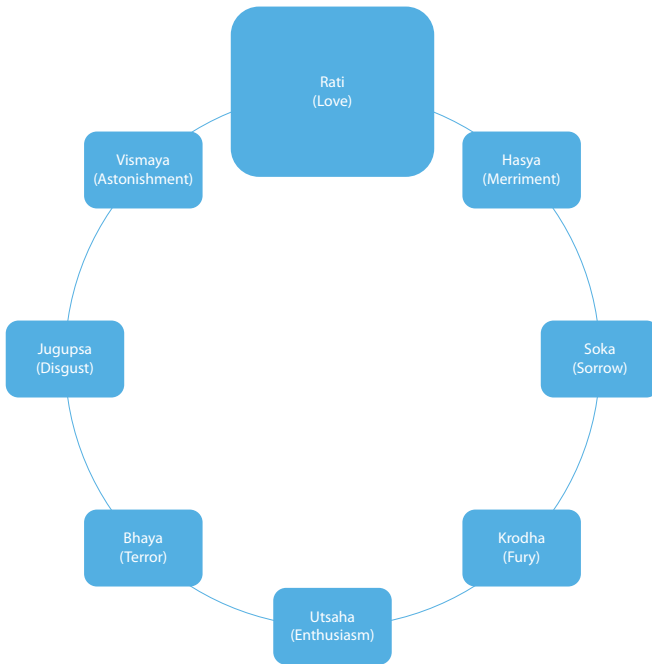


Figure 3. *Sthāyibhāva* (Stable representational states)

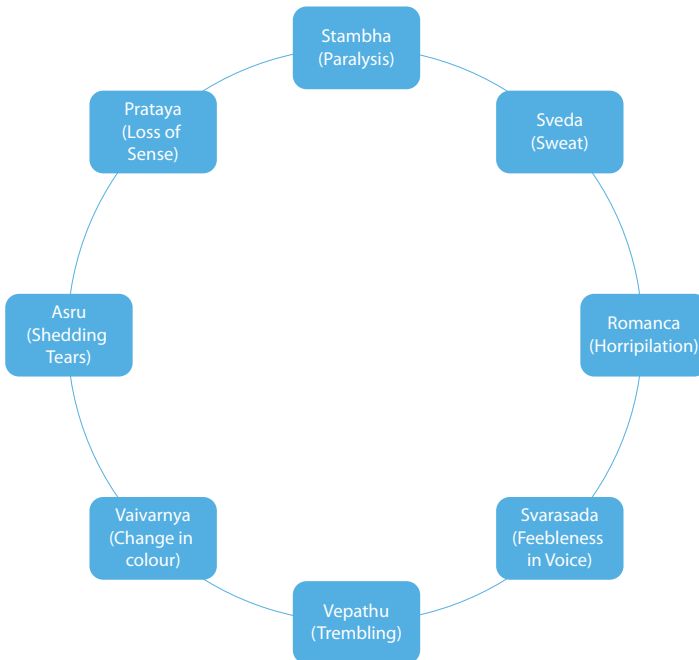


Figure 4. *Anubhava* (embodied states)

Nirveda (Despondency)	Glani (Weakness)	Sanka (Suspicion)	Asuya (Envy)	Mada (Inebriation)
Srama (Exhaustion)	Alasya (Lethargy)	Dainya (Depression)	Cinta (Anxiety)	Moha (Delusion)
Smriti (Recollection)	Dhrti (Fortitude)	Vrida (Bashfulness)	Capalata (Inconstancy)	Harsa (Joy)
Avega (Excitement)	Jadata (Stupefaction)	Garva (Arrogance)	Visada (Despair)	Autsukya (Curiosity)
Nidra (Sleep)	Apasmara (Loss of memory)	Svapna (Dreaming)	Prabodha (Wakening)	Amarsa (Indignation)
Avahittha (Dissimulation)	Ugrata (Cruelty)	Mati (Self-assurance)	Vyadhi (Sickness)	Unmada (Madness)
	Marana (Death)	Trasa (Fright)	Vitarka (Deliberation)	

Figure 5. *Vyabhichari* (Transitory Feelings/Moods)

Bharata's is a closely observed text. In this, it resembles Charles Darwin's pioneering work *The Expression of the Emotions in Man and Animals* (1872). In this cross-culturally oriented text, Darwin described sixteen expressions, including several listed in the *Nāṭyashāstra* almost two millennia earlier. His research sought to establish that certain basic emotions were recognizable across cultures via invariant facial expressions and gestures. Darwin, a true scientist, got subjects in all five continents and about thirty countries to respond to his questions concerning the physiology of the emotions (see Ekman, 2007). We can perhaps create at this point a brief thought experiment whereby Bharata responds across time to Darwin's questions.

Let us here consider just two main emotions – surprise and disgust – that concern both these thinkers.

- DARWIN asks:

Is **astonishment** expressed by the eyes and mouth being opened wide, and by the eyebrows being raised?
- BHARATA answers:

Astonishment (*vismaya*) is created by Determinants (*vibhava*) such as illusion, magic, extraordinary feats of men, great excellence in painting, artworks in parchment and the like. It is to be presented on stage

by Consequents such as wide opening of the eyebrows, horripilation, perspiration, moving the head to and fro and expressions of “Bravo Bravo” ...

DARWIN asks: Is **disgust** shown by the lower lip being turned down, the upper lip slightly raised with a sudden expiration, something like incipient vomiting or like something spit out of the mouth?

BHARATA answers: **Disgust (*bibhatsa*):** Disgust relates to women and persons of the inferior type. It is caused by Determinants (*vibhava*) such as hearing and seeing unpleasant things. It is to be represented on stage by Consequents such as contracting all the limbs, spitting, narrowing down of the mouth...by covering the nose, contracting all the limbs, [which in general conveys uneasiness and heartache]

It is apparent even from these brief extracts that Bharata’s descriptions are totally embedded in the culture of his time and directly incorporate the prejudices of his era. At the same time, he is observationally acute, painstakingly listing in great detail the conventions associated with an emotion. It is worth noting here that each of these eight emotions are actually coded in a ‘multimodal’ fashion – each associated with a different color, a different god, etc. (see Tables 2 and 3).

Putting Darwin’s questions to Bharata is in the realm of the counterfactual, since neither can speak for themselves today. However, when I put Darwin’s questions to two famous contemporary Indian women dancers, trained in depictions of *rasa*, they each independently brought up the matter of cultural coding, emphatically suggesting that it was the business of culture to actually *redesign* any basic emotions we may share, so that they were precisely *not* apparent in their raw, natural form.

Here is the Kathakali dancer, Maya Krishna Rao, for example, responding to Darwin:

DARWIN: Is astonishment expressed by the eyes and mouth being opened wide, and by the eyebrows being raised?

MAYA: Yes, but the mouth is closed in Kathakali.

DARWIN: Is laughter ever carried to such an extreme as to bring tears into the eyes?

MAYA: Kathakali has no use for anything as naturalistic as tears! Moreover, *hasya* (laughter) in Kathakali can indicate contempt/mockery etc.

DARWIN: When a man is indignant or defiant does he frown, hold his body and head erect, square his shoulders and clench his fist?

MAYA: Kathakali is a performing art, so it has a basic stance. The shoulders etc. are always erect. There is a *mudrā* (gesture) as well for anger but it is not the clenched fist. (Personal communication)

Or, as the Bharatanatyam dancer, Leela Samson, forcefully put it:

It's only children who say 'no' to mean 'no', those better skilled at conveying an emotion, may say 'no' to mean 'yes'. This is especially true in a *rasa* like *śṛṅgāra*, where coyness and so on are part of the repertoire of love.

(Personal communication)

Very au fait with Bharata's text, Leela, like Maya, knew that there were many different types of love (*śṛṅgāra*) to be represented on stage and each of these sub-types of love were described quite differently in the *Nāṭyashāstra*. For example:

sambhoga (love in union), which according to Bharata, was associated with the *vibhava* pleasant season, garlands, unguents, ornaments, people dear and near, sensual objects and with the *anubhava* clever and significant glances in eyes, movement of eyebrows, as well as the *vyabhicari bhava* such as fright (*trasa*) and *alasya* (*lethargy*). This sort of love was to be performatively contrasted with, for example, *vipralambha* (love in separation), associated with the *anubhava* of dejectedness (*nirveda*) and languor (*glani*), and so forth.

Furthermore, there were special 'glances' associated with love (Bharata lists at least thirty-six). For instance:

The resting glance in which eyelids have been let down due to fatigue, corners of the eyes are narrowed, and the eyeballs are fallen, is called *pranta* (tired).

The glance in which ends of the eyelashes are slightly bent, the upper eyelid descending in shyness, the eyeballs lowered due to shame, is called *lajjanvita* (bashful).

The languid glance in which the eyebrows and the eyelashes are slowly moving, and eyeballs are covered [under the eyelids] due to fatigue, is called *glana* (lazy).

The concealed glance, which is once moved, and once at rest, slightly raised, obliquely open and in which the eyeballs are timid, is *sankita* (apprehensive).

All this wealth of detail in Bharata's text leads us to infer the following points:

- a. *Rasa* theory constantly emphasizes that a feeling does not exist 'out there'. You cannot deictically point to it.
- b. A *rasa* is performative. It has to be felicitously enacted.
- c. It is a process rather than a thing, and it involves active movements both bodily and verbal.

- d. Since every emotional act in *rasa* theory is essentially performative, it follows that the whole theory depends on the idea of a culturally clued-in audience – who are able to read and decode the slightest twitch of an eyebrow.
- e. In the *Natyasastra* as in contemporary pragmatic theory, the interdependence of speaker/hearer, performer/audience is basic, forming an intimate ABABAB conversational as well as cognitive sequence. Even when the dancer/actor/talker is deeply immersed in creating an emotion, lost in her art, the other/the *rasika*/the audience is intimately present, a psychic self. This audience of *rasikas* are thus crucial not just to the interpretation but to the actual production of emotion. What goes on in a watching audience's heads in this sense, could be seen to be mimicking and reproducing what is happening 'out there' as it is embodied by the actors: neurally, physiologically and emotionally.
- f. The bodily enactments of emotion in *rasa* theory are also substantially presented in a codified language of *mudrā* (gestures). These *vibhāva* (cultural cues) are arbitrary rather than learnt, and thus like any language, can be decoded only by those who know the language (see Figures 1 and 2).
- g. Moreover, several 'codes' (multimodally involving body language, dress and color codes, music and verbal narrative) have to be read simultaneously to construct and re-construct the mental events taking in the arena of, say, a dance-drama performance of classical Kathakali (see Tables 2 and 3).

To summarize, *rasa* theory projects the idea of emotion as a culturally embodied and co-constructed mental category – shared between performer and community, who are both playing the serious game of coding and decoding the 'essence' of the emotions that bind them together. It is in this key respect that Bharata's socially embedded theory of emotions differs so radically from Darwin's evolutionary one, cited above, and, reread today in the light of modern theory, indicates an emergent critique of Darwin's assumption that our emotions are 'naturally' available to us through bodily displays that are invariant across cultures. Croft and Cruse, writing on cognitive linguistics, suggest that what is needed is a 'cultural frame' to 'translate' the complex codes of *rasa* (see also Gibbs and Cameron's (2008) notion of metaphor as performance within 'dynamics systems theory'). Bharata's text, which runs counter to the physiological frame of emotional 'naturalism', pace Darwin, could constitute exactly such a 'frame' with the possible added advantage that it is composed in such a fashion as to be highly amenable to computer coding.

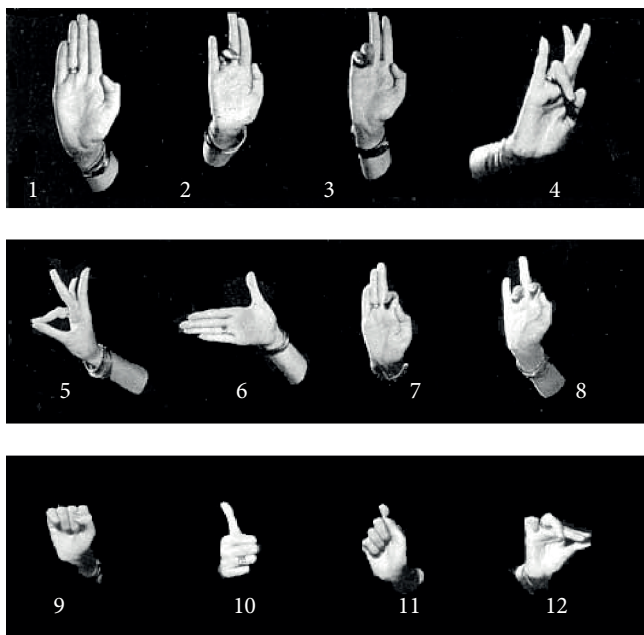


Figure 6. Illustrating the fact that the highly coded meaning of gestures (*mudrā*) in Indian dance/drama cannot be decoded without knowledge of the 'language' they exemplify



Figure 7. The dancer Maya Krishna Rao performs a male role in the Kathakali genre. In many forms of Indian dance and drama, men traditionally played women's roles. In contemporary India, the reverse is also increasingly possible

Table 2. Rasa and color codes**Varna (color)**

- Srngara
- Hasya
- Karuna
- Raudra
- Vira
- Bhayanaka
- Bibhatsa
- Adbhuta

Syama
Sita
kapota
Rakta
Gaurav
Gaurav
Nila
Pita

Rasa
☐ Śrīngāra (Love)

☐ Hasya (Humor)

☐ Karuna (Empathy)

☐ Raudra (impetuous anger)

☐ Vira (Heroic)

☐ Bhayanaka (Terrible)

☐ Bibhatsa (Disgusting)

☐ Adbhuta (Surprising)
Deities
☐ Visnu

☐ Pramatha

☐ Yama

☐ Rudra

☐ Mahendra

☐ Kala

☐ Mahakala

☐ Brahma
Figure 8. Rasa and the codes of mythological divinity**5. Conclusion: “Eureka! Immense.”**

Speaking of ‘frames,’ one of Henry James’ most famous stories, *The Figure in the Carpet* is framed by its cross-cultural title. Just as the ‘rich design’ of a Persian carpet may have woven into it a hidden message, this story is about figuring out the ‘essence’ of the work of a famous author. Here, the nameless narrator, a reviewer, is obsessed with novelist Vereker’s statement that every critic has so far missed the point of his work – “the particular thing I’ve written my books most for”. The narrator shares his frustration at not being able to fathom this authorial “secret” with his friend Corvick and Corvick’s fiancé Gwendolen. Then, travelling in India (of all places!) Corvick dies in an accident but not before he wires Gwendolen and the narrator his enigmatic message “Eureka! Immense”. In this tantalizing narrative,

James writes about the shared sense of loss engendered by the fact that there always exists that Eureka moment in textual discovery. Yet, it can lie ever out of reach.

My own argument in the present essay has been that this sensation of having perceived the world anew, of having grasped the elusive and perhaps also illusive 'essence' of things, is central to the meaning of 'creativity' across cultures. Hence, if one were to now return to the puzzling question of why experts of Indian origin such as Nadella, Chandra and Bhargava, comfortably settled in the west, have turned today to an ancient Indian tradition of poetics, one might infer that they are intrigued by the 'figure(s) in the carpet' conundrum that India sets them.

India offers any 'coder' a vast, perpetual puzzle with any number of Eureka illuminations in the offing. With one sixth of the world's languages from four major language families – the Indo-Aryan, the Dravidian, the Austro-Asiatic and the Tibeto-Burman — it is emblematic of all complex, multilingual, plural contexts. Simultaneously, as I have tried to show, an idea that is often pursued with relentless vigor in ancient Indian texts is that of a set of attenuated grammatical 'rules' or codes that distill the essence of all this multiplicity in the form of the briefest of codes or sutras.

'Creativity', under these conditions, however transcendent or mundane, is an attempt to aesthetically recompose the world so that prolific variations of linguistic and other forms can be both preserved and contained. Vikram Chandra (2014) thus devotes an entire book of non-fiction titled *Geek Sublime: Writing Fiction, Coding Software* to a comparison between the pleasures of writing code and the complex seductions of language as explained by grammarians such as Pāṇini and Abhinavagupta. Poetry, as Chandra sees it, is not to be confused with code; however, it can marvelously illuminate the creative processes that instigate and inspire the writing of computer programs. Coding and poetry both recompose the world; in this respect, the aesthetic that animates both is similar. Each relies on combining patterns and using signs in repetitive yet new ways each time. Analogy, harmony, balance and 'symbolic short-cuts' characterize both forms of 'meta-linguistic' activity. Both offer examples of puzzles, through tropes like metaphor, that extend our imaginations in ways that are aesthetically pleasing as well as pragmatically satisfying. Both can be highly addictive. And the Jamesian 'Eureka!' experience is common to both.

As Chandra plausibly argues, poetry and coding, each long celebrated on the Indian subcontinent, teach us not only to 'problem-solve', but to do so in ways that can entail huge amounts of cognitive pleasure. Magically enhancing our everyday 'fingertip consciousness', they offer an exciting array of tools to enter a global e-world. In this final section, then, I return to the question that I asked in the opening paragraphs of my essay.

Will the current crop of highly inventive e-technologies succeed in generating new 21st century styles of thinking, new ‘selfies of the mind’? On the face of it, these palpable technological changes have already had a significant influence on writing styles and entertainment genres across the globe, eclectically ranging from email to chat-rooms, Facebook, Twitter, SMS messages, video games, emojis, blogs and so on (for a fuller discussion of these forms, see Nair, 2015). Not only are these new modes of communication tantalizingly poised between the visual and the aural, speech and writing, distance and intimacy (and in India also often constitute an amalgam of two or more languages), a notable common feature that characterizes these multifarious forms of e-creativity is that they are unavoidably interactive. In this connection, my essay has tried to demonstrate, especially in Section 4, that such a co-construction of subjectivity is a value repeatedly stressed in Indian theories of poetry, drama and performance. No wonder then that Nadella and others turn to the subcontinent when they look to write new codes that include inter-subjective and emotive components and address the challenges that arise in a ‘traditional’ society at a time of mind-untethering technological change when the basic dimensions of human experience (touch, sight, hearing, for example) are being ‘retooled’. Touchpads on computers require constant intimate contact between a machine, fingertips and the mind; handheld cellphones direct the eyes 24x7 to evaluate onscreen images; earphones channel music into our ears so that we can walk down a street without paying all that much attention to the disruptive sounds around us. Such world developments in the technological imaginary connect ‘technological hubs’ in Indian ‘IT cities’ such as Bangalore, Hyderabad and Gurgaon to the faraway locations in the USA where Nadella, Bhargava and Chandra live.

What these new Indian thinkers on ‘creativity and coding’ may therefore willy-nilly have achieved, at least in the realm of soft power, is to bring to the world – not just to the ivory tower academia but also to the multi-million dollar business of e-communication – a set of ‘defamiliarizing’ perspectives. In this process, the binary relationship between ‘two cultures’ – Indian and ‘western’, science and art, poetry and code virtual and real – could, in principle, be recomposed (Nair, 2020).

This essay has argued that, simply by suggesting in unison that the writing of computer codes and poetry share something in common in a world where computers are increasingly part of the imaginative furniture of our lives, Nadella, Chandra and Bhargava may have enhanced our sense of wonder about those prismatic, multimodal ‘figures in the carpet’ that have so animated human thought, feeling and creative performance from Bhāskara and Hemachandra to Sylvia Plath and Henry James.

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The website <http://andreag2b03.tripod.com/Mudras.html> is the source for the images in Figure 6 and once, again, strenuous efforts have been made to seek permission for these images, to which I am greatly indebted. Finally, I wish to thank dancer and actor Maya Krishna Rao for the use of her photograph in Figure 7 and Ranjit Nair for his meticulous help with the Sanskrit transliteration.

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The creative potentiality of metaphor is one of the central themes in research on creativity. The present volume offers a space for the interdisciplinary discussion of the relationship between metaphor and creativity by focusing on (re)contextualization across modes and socio-cultural contexts and on the performative dimension of creative discourse practices. The volume brings together insights from Conceptual Metaphor Theory, (Critical) Discourse approaches to metaphor and Multimodal discourse analysis. Creativity as a process is explored in how it emerges in the flow of experience when talking about or reacting to creative acts such as dance, painting or music, and in subjects' responses to advertisements in experimental studies. Creativity as product is explored by analyzing the choice, occurrence and patterning of creative metaphors in various types of (multimodal and multisensorial) discourses such as political cartoons, satire, films, children's storybooks, music and songs, videos, scientific discourse, architectural reviews and the performance of classical Indian *rasa*.

"The chapters in this volume, covering different genres, modes, and media, eloquently demonstrate that metaphors are not only concepts that we live by (Lakoff and Johnson), but also capture truly innovative and unique insights (Black). Its authors rightly insist that metaphors must be studied in combination with other tropes as well as other semiotic resources, and show recommendable sensitivity to the importance of the specific context of use."

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