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Introduction: Thirty Years After

This issue of the Journal of Cognitive Semiotics presents a constructive, critical assessment of Conceptual Metaphors Theory (CMT) thirty years after its first introduction. Many characterizations and polemical caricatures of CMT portray it as a reductionist approach: an armchair preconception that language and conceptual formations in general are (just) the expression of more primitive and fixed pre-linguistic experiential structures, which are due to having a body in a physical environment. The papers here sketch a more nuanced view of CMT: i) experiential structures depend on *culturally and socially* embodied processes; ii) experiential structures are resources for conceptualization, locally deployed in flexible ways, with the potential of evolving over time; iii) rigorous philosophical, empirical, and experimental research are all essential in developing CMT, while more theory-driven hypothesis testing, relying on corpora and experimental settings, is strongly needed.

CMT has proved a tipping point in the development of cognitive linguistics and cognitive semiotics. The 1979 publication of *Metaphor and Thought* (Ortony 1993 [1979]), quickly followed by *Metaphors We Live By* (Lakoff & Johnson 1980), revolutionized the fields of literary, linguistic, and – more generally – cognitive studies (for recent reviews, see Gibbs 2008, 2011). By highlighting how a large part of one's linguistic expressions and abstract conceptual domains are structured by bodily experience, CMT has strongly pushed an embodied perspective on cognition (Gibbs 2006).

In the thirty years since the introduction of CMT, many debates have arisen and much development has occurred: endless explorations of conceptual metaphors in diverse domains of human cognition and expression; attempts at better investigating the cultural, cognitive, and neural mechanisms that underlie conceptual metaphors (Brandt 2013, Fauconnier & Turner 2003, Feldman *et al.* 2009, Gallese & Lakoff 2005); and, finally, attempts to expand and articulate the domains of experience that ground conceptual metaphors (Adamson 2007; Fusaroli 2011; Fusaroli, Demuru & Borghi 2012; Tylén *et al.* 2013). We therefore felt the need to critically assess the current state of CMT, to highlight both the critiques it faces and the vitality it shows. What is at stake in 2013 in studying conceptual metaphors? Has understanding of conceptual metaphors changed? What are the theoretical and analytical myths to avoid? Which are the hot new topics in the field?

In this introduction, we provide a short primer to CMT, followed by critical discussion of the three broad areas covered by the articles: (a) social and cultural dimensions of embodied human experience, (b) the many time scales at play in cognitive processes, and (c) empirical and

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experimental challenges to CMT. These areas strongly emphasize the vitality of the CMT enterprise, the need for increased epistemological debate and – crucially – the need for a more empirically informed, dynamic view of metaphorical projections, as embedded in larger social and cognitive processes.

1. A PRIMER ON CONCEPTUAL METAPHORS

CMT is not simply the study of linguistic metaphors; it aims at tackling crucial cognitive problems: e.g., how do people understand abstract domains such as morality, politics, and mathematics? How are they able to understand language and each other? CMT offers a deceivingly simple answer: it is thanks to bodily experience, approximately shared across humans and metaphorically projected onto abstract domains, making them understandable.

Lakoff and Johnson's initial focus was on how talking about abstract domains is based strongly on more concrete domains of experience (e.g., MIND IS A CONTAINER). Nevertheless, the theory quickly developed into a more general approach to meaning and cognition (*cf.* the symbol grounding problem: Harnad 1990). By learning to interact with the environment and control one's body, each human infant directly acquires meaningful experiential structures including *kinesthetic image schemas*. Kinesthetic image schemas are specific, recurring action paths formed through time in people's everyday interaction with the world around them (Evans & Green 2006: 176). For example, the CONTAINER schema structures people's regularly recurring experiences of putting objects into, and taking them out of, a bounded area. They experience the tactile version of this when handling physical containers; they experience it visually as they track the movement of an object into or out of some bounded area or container. It is experience in all its sensorial richness, meaningful by virtue of one's embodiment that forms the basis of many of one's most fundamental concepts. The universal character of kinesthetic structuring follows from such 'gross patterns' of human experience as 'our vertical orientation, the nature of our bodies as containers and as wholes with parts', etc. (Lakoff 1987: 303). Image schemas are bodily motivated by relatively abstract conceptual representations that act as regularities to orient future experiences.

Whenever one tries to grasp an abstract notion, one tends to project image schemas and basic concepts onto it metaphorically, so as to have a basic structure on which to rely for understanding and reasoning. Trying to understand and use the notion of 'mind', for instance, one might employ the container schema: people put ideas into each other's minds; people have empty minds, according to the metaphorical conceptual formulation describable as MIND AS CONTAINER. A conceptual metaphor is the projection of basic experiential structure from concrete domains of experience such as objects, movements, and spatial orientation to abstract domains of experience such as mathematics and morality. Through repeated metaphorical mappings, the human experiential domain expands to new areas and still remains easily understandable and shareable, thanks to people's shared basic embodied experience.

CMT quickly gave rise to two main directions of research: the mapping of existing metaphorical conceptual structures and the attempt to ground CMT in the growing field of cognitive neuroscience. The first produced an ever increasing number of studies displaying evidence of and mapping out image schemas and conceptual metaphors in the most diverse domains of human experience and expression, including mathematics (Lakoff & Núñez 2000), political discourse (Lakoff 2002, 2006), literature (Lakoff & Turner 1989) pictorial representations and comics (Eerden 2009; Forceville 1998, 2005, 2006; Refaie 2003; Rothenberg 2008; Shinohara & Matsunaka 2009), videos (Fahlenbrach 2005, 2007), sign languages for the deaf (Taub 2001; Wilcox 1993), and cultural knowledge encoded as body *habitus* or action structure (Bailey *et al.* 1998; Casasanto 2009a; Kimmel 2005, 2012). The second gave rise to cognitive models of cross-domain mappings (Brandt 2013, Fauconnier & Turner 2003) and the neural theory of language (Feldman *et al*. 2009, Gallese & Lakoff 2005, Lakoff 2008, Lakoff & Johnson 1999).

2. DEVELOPMENT AND CRITIQUES

Such overwhelming success soon brought critics (Haser 2005, McGlone 2007, Pinker 2007, Rakova 2003). Even within the CMT community, the most accurate analyses highlighted the need to revise some of the theory's initial tenets. Despite CMT being open from the start to the role of language and culture (Johnson 1987, Lakoff & Johnson 1980), the dominant characterizations of CMT portrayed conceptual metaphors as highly stable '*fixed* patterns of ontological correspondences across domains' (Lakoff 1993: 220) strongly defined by the experiential structure of an isolated infant interacting with a physical environment.

Building on thirty years of research on CMT, the articles in this issue present more nuanced views. They portray a plurality of perspectives, both in their degree of agreement with CMT and in their methods: philosophical conceptual analysis (Faur, Leezenberg, Pawelec), corpus linguistics (Allan, Deignan & Cameron, Mouton, Sauciuc), visual analysis (Nino & Serventi), gesture analysis (Cienki), historical linguistics (Allan, Mouton), or experimental studies (Bundgaard, Sauciuc). An overall picture emerges: i) basic experiences include social and cultural dimensions; ii) linguistic and conceptual metaphors are not fixed but emerge, develop, and are flexibly deployed on different time scales; iii) empirical research plays a crucial role in understanding how this happens.

2.1 The social and cultural dimensions of experience

Much research has been devoted lately to the social and cultural motivations of embodied experience (Fusaroli, Granelli & Paolucci 2011; Menary *in press*; Morgagni 2011, 2012; Ziemke *et al.* 2007), as well as to conceptual and linguistic structures (Fusaroli, Demuru & Borghi 2012, Fusaroli & Tylén 2012, Loreto & Steels 2007, Steels 2012, Tylén *et al*. 2013, Ziemke *et al*. 2007, Zlatev 2008). The perspective that emerges is that one's body and one's basic sensorimotor skills, which constitute a crucial structure for most of one's cognitive processes, are – in important ways – intersubjectively

distributed. Emotional and interactional rhythms in early infancy are crucial in shaping cognitive development (Di Paolo & De Jaegher 2012, Raczaszek-Leonardi *et al.* 2013, Vasudevi Reddy 2008, Trevarthen 2012, Violi 2012). Narrative frames and other sociocultural practices play a crucial role in defining a shared structure for cognition in general (Gallagher 2005, Gallagher & Hutto 2008, Hutto 2008, Raczaszek-Leonardi *et al*. 2013) and – in particular for joint attention – pointing and re-enactment of both successful and unsuccessful acts (Donald 2001, Sinha 2009). Social dynamics of interaction strongly motivate categorization and conceptual structures (Baronchelli *et al.* 2012, Baronchelli *et al.* 2010, Fay *et al.* 2010, Garrod & Doherty 1994, Gong *et al.* 2012).

Accordingly, the experiential bases of conceptual metaphors as they are deployed and stabilized in language and other expressive behaviors should be reconceived as deeply shaped by interpersonal social and cultural dynamics along the lines proposed by e.g. Leezenberg (*this volume*) and Caballero & Ibarretxe (*this volume*). Leezenberg suggests that experience and cognitive processes are not to be reductively located within individuals; on the contrary, they participate in larger distributed social and linguistic practices (Fusaroli, Gangopadhyay & Tylén *in press*; Fusaroli, Raczaszek-Leonardi & Tylén *in press*; Hutchins 2011).

2.2 The time-scales of conceptual metaphors

As the contributors to this volume point out, it is not enough to introduce social and cultural dynamics among the pre-linguistic experiential structures that motivate conceptual metaphors. Extensive analyses of the use of conceptual metaphors in context by Brandt, Deignan and Cameron, and Evans show that conceptual metaphors are like a bundle of conditions to be enacted locally in a context continuously reshaped by that context. Similarly, Faur, Pawelec, and Steen highlight how conceptual metaphor use in context tends to be much more creative than CMT's original formulation would lead one to think, involving both deliberate thought and creative effort. These flexible, dynamic aspects of conceptual metaphor do not solely concern superficial contextual use of such metaphor; they force one to reconceive the very stability of conceptual metaphor. Allan and Mouton adopt an historical perspective to observe how metaphorical conceptual formations and their linguistic expressions – far from being fixed patterns – are born, evolve, and die. Together, these findings fully bring CMT into a dynamic perspective on cognition, where experiential patterns constitute slowly evolving constraints for fast evolving, ongoing, context-sensitive cognitive processes (Dale *et al.* 2013; Fusaroli, Bahrami, Olsen, Rees, Frith, Roepstorff & Tylén 2012; Larsen-Freeman & Cameron 2008; Spivey 2007; Tylén *et al*. 2013).

2.3 Empirical and experimental research on conceptual metaphors

Gibbs (*this volume*) offers a useful analysis of many critiques to which CMT has been exposed. Among his suggestions is that CMT research should become more empirical, explicitly putting its assumptions and positions to the test. The Pragglejaz method (Pragglejaz Group 2007) offers a

welcome development in this direction, aimed at establishing explicit criteria for identifying metaphors. Explicit criteria and reproducibility of analysis are ever more crucial as CMT is increasingly applied to large corpora and non-verbal domains: e.g., gesture (Cienki *this volume*), visual artifacts (Nino & Serventi *this volume*), and even tango dancing (Kimmel 2012). These analyses support a nuanced version of CMT where conceptual metaphors are but one motivation for linguistic behavior such that they consist of dynamically evolving conceptual patterns shaped by cultural practices and contexts.

Meanwhile, experimental research is confirming basic intuitions of CMT while likewise highlighting the need for a more nuanced perspective. Gibbs' pioneering empirical work (Gibbs 1994, 2000, 2003; Gibbs & Cameron 2008; Gibbs & Colston 1995; Gibbs & Tendahl 2006) was quickly followed by e.g. (Boroditsky 2001; Boroditsky & Ramscar 2002; Casasanto 2009a/b; Casasanto & Jasmin 2010; Gibbs 2008; Gibbs & Matlock 1999; Glenberg & Kaschak 2002; Matlock *et al.* 2003, 2005; Thibodeau & Durgin 2008; Torralbo *et al.* 2006). These studies provides extended evidence that people understand certain domains in terms of other domains in a way that runs deeper than language: e.g., cumulative psycholinguistic, gesture and low-level psychophysical tests have persuasively established that people talk and think about time in terms of space and motion, but not *vice versa*.

At the same time, they add new dimensions to the understanding of conceptual metaphor. They suggest that people do not simply think about time in terms of space, but that different linguistic profiling of such projections – e.g., space as one dimensional (linear) as opposed to three dimensional – strongly impacts the way they think about time. In other words, the linguistic expression of conceptual metaphors feeds back on those metaphors (Casasanto 2009b). Other experiments bring into question the strength of metaphorical conceptual mapping (e.g., Chen 2007) – even showing behaviour that is at odds with the underlying metaphors (Casasanto 2008a/b, Casasanto & Boroditsky 2008). Far from denigrating the importance of CMT, collectively these studies question the possibility of understanding conceptual metaphors simply by analyzing linguistic patterns. They call for more extensive integration of CMT into a complex framework of social and cognitive dynamics.

2.4 Between metaphors, semiotics and cognition

CMT displays an interesting trajectory within the general epistemological development of cognitive science as it moves from cognitivism to connectionism and embodiment to embracing a fully dynamic, socially-situated perspective on cognitive processes (Fusaroli & Paolucci 2011, Menary 2010b). CMT was born from the attempt to move beyond a traditional, strongly representationalist form of cognitivism to embrace connectionist ideas of neural networks structured by bottom-up perceptual learning (Guignard 2011, Rastier 2011). The idea of an innate, universal generative grammar (Hauser *et al.* 2002) was replaced by pre-representational sensorimotor image schemas dependent on contingencies of the human body (Hampe 2005, Johnson 1987). This led to an initial

emphasis on universal (or quasi-universal) conceptual structures: i.e., roughly invariant across individuals sharing common bodily and environmental structures. This gave rise to notions such as *primary metaphor*, *scheme*, *frame*, and *prototype*, deeply motivated by structures of the individual body: the primary source of all experience (Ziemke *et al*. 2007, Zlatev 2007).

Many of the papers in this issue question both the stability and universality of embodied experience and its expression in image schemas and conceptual metaphors. Already from the cradle, human experience is deeply social: shaped by cultural traditions (Reddy 2008, Sinha 2009, Zlatev 2008). The bottom-up learning principles of connectionism do not discriminate between bodily, environmental, and social invariants (Clark 1997, 2008). It is not surprising that conceptual metaphors vary across time and culture, motivated by different experiential invariants. Many of these papers highlight the creative epistemic use of metaphors. By expressing conceptual metaphors, exploring their consequences, recombining them, and modifying them, one increases one's knowledge, shapes new behaviours, and changes the cognitive environment in which cognitive processes take place. Far from just being the expression of a physically reductionist, solipsistic embodied experience, conceptual metaphors become resources, which are evolved and deployed in a distributed cognitive arena.

These new – albeit still tentative – developments in CMT resonate strongly with dynamic, extended, distributed, and enactive perspectives in cognitive science (Alac 2011; Chemero 2009; Clark 1997, 2008; Hutchins 1995, 2005; Maturana & Varela 1980, 1987; Menary 2010a; Noë 2002, 2004, 2009, 2012; O'Regan & Noë 2001; Spivey 2007). The individual is recast as a permeable cognitive system coupled from the start with its environment and with individual and cultural practices. Conceptual metaphors are recast as dynamic invariants of these distributed systems (Raczaszek-Leonardi and Kelso 2008): statistical constraints to experience and thought interacting with other cognitive structures liable to be used as resources and to slowly evolve over time. The contributions to this issue provide ample and varied insight to proceed further on an exciting direction for CMT and cognitive science.

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Why Do Some People Dislike Conceptual Metaphor Theory?

Conceptual metaphor theory (CMT) is the dominant force in the contemporary world of interdisciplinary metaphor studies. Over the past thirty years, scholars working within the CMT framework have gathered an impressive body of empirical research using a variety of linguistic, psychological, and computational modeling methods that supports key parts of the theory. However, CMT has also been widely been criticized – both as a theory of metaphor use and for its claims about the embodied, metaphorical character of abstract thought. This article describes some of the reasons people dislike CMT and suggests ways that CMT scholars may alter some people's misunderstandings and address their legitimate concerns about the theory.

Key words: conceptual metaphor theory (criticisms), embodied cognition, psycholinguistics, metaphor identification, inferring conceptual metaphors.

1. INTRODUCTION

The thirty years since conceptual metaphor theory (CMT) first came onto the metaphor scene has been a period of intense theoretical and empirical activity, as scholars from many academic disciplines – e.g., psychology, linguistics, philosophy, literature, law, marketing, politics, nursing, music – have investigated the myriad ways – e.g., language processing, reasoning, decision-making, memory, learning, concepts, emotion – that metaphor shapes language and thought. Although the idea that metaphor may be part of thought and not just language has been around for centuries[1], Lakoff and Johnson's 1980 book *Metaphors We Live By* first defined what counts as a 'conceptual' metaphor and provided an empirical method for uncovering conceptual metaphor from analysis of everyday language. The vast interdisciplinary literature suggests that CMT has become the dominant perspective on metaphor. It has touched dozens of academic fields and topics. Yet there are many skeptical questions about CMT from

[1] See (Gibbs 1994) for a discussion of this history.

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critics, including people whose research has otherwise little to do with metaphor (e.g., Murphy 1996, Pinker 2007).

This article explores some of these criticisms, describes possible reasons for negative reactions to the theory, and suggests ways that CMT scholars may address continuing misunderstandings and legitimate concerns. I do this primarily from the perspective of cognitive psychology and psycholinguistics: fields that aim to offer a realistic, psychological account of speaking, understanding, thinking, and acting in metaphorical ways.

2. THE IMPACT OF CMT

CMT has had major impact on four broad concerns in the humanities and cognitive sciences.

First, CMT has played a significant part in the rise of cognitive linguistics with its efforts to offer a new way of thinking about linguistic structure and behaviour. Abandoning the traditional generative approach to linguistics, which embraces autonomy of language from mind, cognitive linguistics explicitly seeks out connections between language and cognition – and, more deeply, language and experiential action. This new vision of linguistics stresses the importance of incorporating empirical findings from a wide variety of cognitive and biological disciplines to create a theoretical description of language. CMT has been especially significant in showing – in concrete detail – something about the contents of linguistic meaning and the substance of fundamental abstract concepts in terms of 'image schemas'. CMT provides a substantive alternative to classic modular views of language that mostly worry about the architectural qualities of isolated language devices. It shows how the study of metaphor offers insights into the overall unity of human conceptual structures, bodily experience, and the communicative functions of language.

Second, CMT offers both a theoretical framework and an empirical method for understanding the pervasiveness of metaphorical language and thought across a wide range of cognitive domains and cultural and linguistic environments. The traditional view of metaphor claims that metaphorical figures express temporary, 'one shot' construals of objects and ideas that do not impact the fundamental, literal contents of human thought and language. Metaphor may be extraordinarily useful for thinking about ideas in new ways and communicating these thoughts in a vivid manner, yet human knowledge is primarily constituted in literal terms. CMT, on the other hand, demonstrates that metaphor is neither a relatively rare, purely linguistic phenomenon nor simply characterized as a pragmatic aspect of language use. Instead, work originating in cognitive linguistics and extending to many other fields has demonstrated that metaphor is properly recognized as a fundamental scheme of thought (Gibbs 2008; Kovecses 2002, 2005) serving many cognitive and social/ideological functions (Gibbs 2008).

Third, the claim that significant parts of abstract thinking are partly motivated by metaphorical mappings between diverse knowledge domains has altered the scholarly conception of the relationship between thought and language. Prior to Lakoff and Johnson (1980), most discussions of how language

shapes thought focused primarily on questions relating to the Sapir-Whorf Hypothesis, particularly within the domain of colour. Cognitive science research in the 1960s and '70s demonstrated an increasing interest in semantic memory, showing how conceptual knowledge was both necessary for language understanding and analyzable in various structural formats (Norman & Rumelhart 1975, Schank & Abelson 1977). However, this work gave most emphasis to the architecture of conceptual knowledge and far less to the actual contents of what people know. Most notably, there were few attempts explicitly to model highly abstract knowledge domains. CMT provided a way to think about how abstract concepts are established and how they influence different domains of human thought, as well as ordinary language use and understanding.

Finally, especially in the last 20 years, CMT has played a leading role in what Lakoff and Johnson have termed (1999) the 'second revolution' in cognitive science: namely, interest in the study of embodied cognition. In particular, cognitive linguistic analyses of language and gesture and psycholinguistics research have played a prominent role in showing the significant degree to which metaphorical concepts are rooted in recurring patterns of bodily activity, serving as source domains for people's metaphorical understanding of many abstract concepts. The great irony is that metaphor, rather than emerging only from rare and transcendent imaginative thought, provides excellent evidence for the embodied foundations of abstract thinking and action (Gibbs 2006a, Lakoff & Johnson 1999). CMT has significantly enhanced understanding of the dynamic links between bodily experience, pervasive patterns of thought, culture, and linguistic structure and behaviour. I am willing to argue that no single theoretical perspective in all of cognitive science has as much explanatory power as does CMT. No matter what one may believe about its value, one clearly must acknowledge that CMT has brought metaphor centre stage, to the highest levels of theoretical discussion in cognitive science.

3. THE EMPIRICAL STATUS OF CMT

Over the years, proponents of CMT have collected an amazing array of empirical evidence that, they claim, supports conceptual metaphor. Cognitive linguistics especially maintains that there are, at the very least, nine broad areas of research whose findings establish the cognitive reality of entrenched metaphorical thought (Lakoff & Johnson 2003). These include systematic patterns of conventional expressions across a number domains and languages (both spoken and signed), lexical generalizations, generalizations across novel cases, historical change, gesture, child language acquisition, metaphorical discourse, psycholinguistic findings, and neural computational models of metaphor.[2] This collection of findings and the diverse methods used in conducting the research – e.g., standard linguistic analyses,

[2] See the appendix to the new edition (2002) of *Metaphors We Live By* as well as (Gibbs 2008, *in press a*).

corpora studies, psychological experiments, computational modeling – provide CMT with a strong empirical base, according to most of its proponents.

At the same time, CMT – from the earliest stages of development to the present – has been the focus of tremendous critical scrutiny. Both advocates and critics have raised numerous questions about its empirical adequacy as a theory of metaphor and its broader theoretical claims on the relations between minds, language, bodies, and culture. In some academic quarters, CMT is ridiculed, dismissed, or ignored (Haser 2005, Pinker 2007, McGlone 2007). The reasons for these reactions are complex but partly stem, in my view, from a failure to read the growing body of research on CMT. One difficulty with many of the debates is that critics seem not to have read much beyond *Metaphors We Live By*; they have only a cursory understanding of more contemporary versions of CMT and the empirical evidence supporting them. Critics typically attack *only* Lakoff and Johnson (1980)[3], never bothering to delve into the huge literature that has applied their ideas to uncovering metaphorical concepts in a vast number of domains.

Nevertheless, in my view CMT suffers from several enduring problems that require both different kinds of empirical data and a more explicit openness to alternative theories than presently found in CMT scholarship. Simply collecting more data relevant to conceptual metaphors – as cognitive linguistics primarily has been done – will not solve the problems that critics raise. Things need to be done differently in the future. To get to that point, one must understand what is it about CMT that leads some people to dismiss it. How might CMT be given a better, fairer assessment in the broader world of interdisciplinary metaphor research? How might CMT advocates do their work more rigorously and better articulate their arguments, to be more convincing to CMT critics? More generally: is it possible to give CMT firmer empirical grounding to find its proper place in a comprehensive theory of metaphorical language and thought, as a theory of situated, embodied cognition?

4. THE PROBLEMS WITH CMT

Many articles and books provide extensive details on the linguistic and psychological research that supports aspects of CMT. I will not attempt to recapitulate this positive evidence; instead, see (Gibbs *in press a*). For the present purposes, I focus on several broad questions:

1. How does one decide what counts as evidence for conceptual metaphor?
2. Are conceptual metaphors truly ubiquitous?
3. What motivates metaphorical thought patterns in language and action?
4. How are conceptual metaphors grounded in minds and brains?
5. Do people ordinarily use conceptual metaphors when producing and understanding metaphorical language?

[3] …And, to a far lesser degree, (Lakoff 1993).

6. Do conceptual metaphors explain the poetic, creative nature of some language?
7. How does CMT compare empirically with alternative theories of metaphor?

These questions relate to different methodological concerns about the evidence brought forward in favour of CMT and the way of obtaining the data. Next I will address these – admittedly overlapping – complaints.

4.1 Metaphoric Language is Not All Based on Conceptual Metaphors

Most early work on CMT focused on conventional expressions such as 'he attacked my argument' or 'their relationship got off to a rough start' that were claimed to be understood by enduring conceptual metaphors: e.g., ARGUMENTS ARE WAR and LOVE RELATIONSHIPS ARE JOURNEYS. Although Lakoff and Turner (1989) explicitly acknowledge that certain metaphorical expressions may be 'one shot' construals, the vast majority of work in CMT has not focused on classic '*A* is *B*' expressions such as 'man is wolf' or 'surgeons are butchers'. Cognitive linguistic analyses *have* been proposed for how people may interpret '*A* is *B*' metaphors, especially within conceptual 'blending' theory (Grady, Oakley & Coulson 1999).[4] The fact remains that most evidence in favour of CMT comes from examination of metaphorical words and phrases that do not fit the traditional '*A* is *B*' form.

This split in the kinds of metaphorical language studied by scholars advocating different theories of metaphor is, perhaps, the single biggest problem in the interdisciplinary world of metaphor studies. Scholars too often make claims about the entire nature of metaphorical meaning – and sometimes metaphorical thought – from their limited analyses of only one type of metaphorical language. Most psycholinguistic and philosophical studies of metaphor focus on '*A* is *B*' expressions, which corpus studies reveal to be not very frequent in discourse (Cameron 2003). These same scholars then criticize CMT for making claims about the ubiquity and meaning of metaphor from analysis of some forms of metaphorical language but not others. Of course, the same complaint can be made against scholars who only focus on '*A* is *B*' metaphors and then attempt to draw broad conclusions about the nature of metaphor from these specialized instances of verbal metaphor. There may not be a single theory of metaphor, given the complexities of metaphorical thought as expressed in language, gesture, and other human actions. Later, I will suggest that all theories of metaphor, including CMT, must be far more open about the limits of their explanations, given the range of metaphorical language that each perspective examines.

[4] See (Lakoff 1993) for one proposal on how some '*A* is *B*' metaphors might be explained in terms of conceptual metaphors.

4.1.1 Isolated Constructed Examples

Many scholars complain that far too many linguistic analyses presented in favour of CMT are based on isolated examples constructed by the research analyst (Murphy 1996, Vervaeke & Kennedy 1996). Even if scholars analyze dictionaries and texts, they say, much of the classic work on CMT suffers from a strong confirmation bias: individual linguistic expressions are selectively chosen and advanced as evidence in favour of one conceptual metaphor or another. Critics suggest that these traditional cognitive linguistic analyses of systematic expressions need not accurately reflect the ways people really speak and write abouabstract topics in metaphorical ways. Taking examples for analysis out of discourse also reduces the chances that other, non-conceptual factors – such as socio-cultural and ideological forces – will be explored for why people speak and write metaphorically.

Furthermore, many critics of CMT – even those working within its framework – argue that the reality of spoken and written discourse is far more complex, in terms of metaphorical thought patterns, than discovered by traditional CMT methods. People frequently combine different metaphorical and metonymical devices within single expressions and mix metaphors in discourse: something that most cognitive linguists now recognize (see also Lakoff & Turner 1989). Critics outside the field see these complexities as at odds with some of the simpler statements made about CMT in its earlier writings. They argue that claims about conceptual metaphors being pervasive – even ubiquitous – or 'what we live by' cannot properly be evaluated without more extensive, quantitative analyses of metaphor in language.

One large and systematic empirical analysis of metaphorically used words in discourse suggests that only about 14% of all words convey metaphorical meaning in context (Steen *et al*. 2010). This raises an important question: what sort of evidence must exist for CMT to be true; If people are only using words with metaphorical meaning 14% of the time[5], does this equate to people using conceptual metaphors frequently, occasionally, rarely – or what? How much ordinary speech and writing must be metaphorical to claim properly that underlying conceptual metaphors are pervasive? CMT scholars have simply not addressed these quantitative issues explicitly in their empirical work and writing, leaving critics to wonder about the value of the theory. Underlying all these skeptical queries is the belief that too much of the evidence supporting CMT comes from the intuitions of linguists and thus may be difficult to verify.

4.1.2 Limitations of the Individual Analyst

Critics of CMT sometimes voice significant skepticism about the conclusions of cognitive linguists, because of their reliance on intuition for conducting systematic analysis of linguistic expressions to infer conceptual metaphors (Gibbs 2006b). Typically, cognitive linguistic analyses of conceptual metaphor do not provide explicit criteria for (a) identifying what constitutes a metaphor in language at either the word

[5] Of course, this varies by discourse genre.

or phrase level, (b) defining systematicity among a set of language expressions referring to a specific abstract target domain such as love, (c) inferring the existence of one – and not another – conceptual metaphor when finding systematicity among metaphorical expressions in language, or (d) determining how representative the analyses of isolated, self-constructed examples – or examples taken from corpora – are of real discourse. Without such criteria, critics see no reason to posit the existence of conceptual metaphor either as a generalization about the language system or the nature of the cognitive unconscious.

This lack of explicit criteria is one of the major obstacles toward CMT's acceptance as a comprehensive theory of metaphor use and understanding. Psychologists have argued that the lack of criteria for specifying conceptual metaphor makes CMT unfalsifiable, because the only data in its favour come from the systematic grouping of metaphors linked by a common theme (Vervaeke & Kennedy 1996): e.g., the conceptual metaphor ARGUMENT IS WAR is presumed to motivate such conventional expressions as 'he attacked my argument' and 'he defended his position'; any expression about argument that does not fit the WAR theme is taken as evidence for another theme such as WEIGHING, TESTING, or COMPARING. This implies that no linguistic statement can be brought forward as evidence against the ARGUMENT IS WAR metaphor, making the basic tenet of CMT impossible to falsify.

An alternative possibility is that 'attack' may have originated in a metaphorical application but evolved to have two independent meanings (Vervaeke & Kennedy 1996; see also Hauser 2005). Consider 'Jane considered his attack on her argument as a attack on her intellectual integrity': one could substitute a synonym such as 'refutation of' for the first 'attack' and 'assault' for the second; but these could not be interchanged without a radical change of meaning. An assault on an argument in not the same as a refutation of it; while a refutation of one's intellectual integrity makes no sense at all. These 'attack's appear to be separate words: 'attack' as a synonym for 'assault' and 'attack' as a synonym for 'attempt to refute'. So one could claim that 'attack an argument' is not necessarily understood by the ARGUMENT IS WAR metaphor.

Some scholars have countered by saying that 'attack' is one word with a simple root, and that all of its meanings have a common sense of argument, hostility, and lack of restraint. The apparently synonymous 'try to disprove' and 'try to refute' (an argument) can only be derived from a metaphorical association with conflict -- but not necessarily war *per se* (Ritchie 2003).

Metaphorical meanings are not fixed. When a term such as 'attack', 'defend', or 'strategy' appears in a discussion of arguments, one cannot be sure whether any given person will associate it with chess, boxing, or all-out war – or with nothing beyond an abstract concept. 'How any particular speaker intends a metaphor to be interpreted, and how any particular hearer does interpret the metaphor, can never be absolutely determined' (Ritchie 2003: 138).

Nevertheless, cognitive linguistic studies have offered an avalanche of data, involving studies from many domains, discourse genres, and languages, showing the powerful influence of conceptual metaphor

in structuring both the conventional and novel ways people speak and write. It is frankly remarkable that scholars of completely different backgrounds and languages have independently reached the same – or very similar – results (Jakel 1999). This speaks positively for the essential claims of CMT. However, it remains unclear whether scholars have used the same criteria in making their judgments about systematicity and conceptual metaphor.

One important development within cognitive studies of metaphor is a greater emphasis on corpora analyses that more broadly explore the range of linguistic and conceptual metaphors in discourse. This research has proven invaluable for CMT in several respects. First, corpora analyses mostly support the wide range of conceptual metaphors identified, by introspection, in cognitive linguistics research; at the same time, they are better able to quantify metaphorical patterns and so provide important insights on the relative salience of conceptual metaphors in different domains: e.g., ANGER IS HEAT is more prominent than ANGER IS A FIERCE ANIMAL (Deignan 2006). Second, corpus studies examining cross-linguistic metaphor use reveal systematic patterns of verbal metaphor consistent with those noted in earlier – more anecdotal – discussions of CMT (Lakoff & Johnson 1980, Kovecses 2002). However, these cross-linguistic studies also demonstrate disagreements about the exact nature of the conceptual metaphors that may be motivating different linguistic patterns. Some alternative conceptual metaphors that have been proposed are thought to reflect more accurately the cognitive reality of metaphorical thought. Yet, many alternative metaphors are seen as motivated by non-conceptual factors. Different inflections of the same word or phrase appear in different evaluative patterns when used metaphorically: e.g., the plural 'flames' conveys negative meanings ('his future crashed in flames'), while the singular 'flame' mostly has positive evaluations ('George still carried a flame for Kelly') (Deignan 2006). Many corpus studies demonstrate similar lexical and grammatical constraints on metaphorical mappings (Stefanowitsch & Gries 2006): constraints that CMT has not always sufficiently acknowledged.

There have been several attempts to create schemes by which metaphorically used language may reliably be identified (Pragglejaz Group 2007, Steen *et al.* 2010). Computational programs have been developed that offer explicit procedures – not just intuitive judgments – for discerning conceptual metaphors motivating different semantic fields or domains of metaphorical discourse (Mason 2004, Martin 1990). Corpus research has begun to create procedures for identifying metaphor in language and thought, such as specifying what counts as a metaphorically used word and what counts as a relevant source domain in a metaphorical mapping (Deginan 2006, Stefanowitsch & Gries 2006).

Psychologists' concerns with the intuitive basis of linguistic analyses are primarily rooted in a belief that immediate metaphor production and understanding rely on fast, unconscious mental processes that people are simply unable to introspect; linguists' expressed intuitions about the cognitive unconscious may be biased by their own theoretical positions. Difficulty introspecting these rapid unconscious mental processes implies that more objective evidence can be collected from individuals who do not hold theory-

biased beliefs. Beyond this, skepticism remains with linguistic analyses that provide only *post hoc* motivations why certain linguistic structures exist. Consequently, there is a great need for experimental evidence that tests prior predictions about what people are likely to do – rather than trying to explain their linguistic behaviour given the existence of certain patterns of speech. Regarding the idea that some idioms are motivated by conceptual metaphor, McGlone writes (2007: 116), in a very critical appraisal of CMT, 'the claim that idioms reflect the metaphoric structure of abstract concepts cannot be objectively evaluated without evidence that is independent from our intuitions. At present, there is simply no evidence suitable for this evaluation'.

A long history of research in experimental psycholinguistics supports the psychological reality of conceptual metaphor in verbal metaphor use (Boroditsky & Ramscar 2002; Casasanto & Boroditsky 2008; Gibbs 1994, *in press a*). It demonstrates that conceptual metaphor both influences people's tacit understanding of why many metaphorical words and phrases have the meanings they convey and shapes their immediate use and understanding of many – but not all – metaphorical expressions. Other empirical work indicates that conceptual metaphor affects children's learning of certain conventional metaphors and can be critical to second-language speakers' comprehension of verbal metaphor. Nobody claims that conceptual metaphor is critical to all aspects of verbal metaphor use. Many metaphorical expressions may not be motivated by embodied conceptual metaphor and so will require different theoretical explanations than CMT offers. Still, the demonstrations of systematic patterns of verbal metaphor within linguistics, as well as the extensive experimental work showing the constraining influence of conceptual metaphor in metaphorical language use, cannot be ignored. At the very least, critics of CMT must acknowledge these lines of experimental research and offer alternative explanations for findings that appear to support CMT's predictions.

Overall, criticisms of cognitive linguists' intuitive analyses are – in principle – correct. This is despite a wealth of data showing that many of these analyses may truly reflect aspects of how people ordinarily think, and speak about, abstract topics and experiences. A great need remains for further specification of the methods employed in traditional cognitive metaphor analyses; but it is simply misguided to dismiss all the work in CMT simply because of early intuitive analyses of isolated linguistic expressions.

4.2 Conventional Metaphors Are Not Really Metaphorical

Some psychologists and linguists argue that many conventional expressions, viewed as metaphorical by cognitive linguists, are not metaphorical at all: they are produced/interpreted by ordinary speakers/listeners as literal speech. These critics suggest that simple expressions like 'he was depressed' are entirely literal and not motivated by a conceptual metaphor such as SAD IS DOWN. Indeed, most ordinary speakers – as well as traditional metaphor scholars in literary studies – do not believe that 'he was depressed' or 'I'm off to a good start in graduate school' are either poetic or metaphorical. In this

way, cognitive linguists presumably fail to draw a distinction between literal and metaphorical meaning (Glucksberg 2001; Keysar, Shen, Glucksberg & Horton 2000; Pinker 2007; Steen 2007).

Such criticism has been voiced frequently since the early days of CMT and is, again, partly rooted in distrust for the intuitions of cognitive linguists who may be theoretically biased and unable to infer unconscious mental processes through introspection alone (Gibbs 2006b). At the same time, critics of CMT frequently suggest that people understand conventional expressions without recourse to conceptual metaphor – because of these critics' own intuitions about the matter! Cognitive linguists do *not* draw a rigid distinction between literal and metaphorical, primarily because of the polysemous nature of the concept 'literal' (Gibbs 1994); but they do clearly distinguish between metaphorical and non-metaphorical thought and language – although they do not see 'non-metaphorical' as defining an internally consistent category. Most simply, metaphorical thought involves a mapping from a source domain into a target domain; non-metaphorical concepts and meaning do not. Expressions like 'I'm off to a good start in graduate school' fit the definition of metaphor perfectly: it refers to, and stems from, the more general, embodied conceptual metaphor LIFE IS A JOURNEY, in which knowledge of journey experiences are projected metaphorically, in a systematic way, into the target domain of being in graduate school.

Simply calling something 'literal', as critics of CMT refer to conventional and idiomatic speech, does not explain why there is systematicity in conventional expressions or why individual linguistic expressions appear to reflect the detailed correspondences that arise from mapping source onto target domain in conceptual metaphor. Critics of CMT are essentially unable to explain the reasons for the observed systematicity in conventional expressions, despite their efforts to explain the facts away by simply calling them 'literal'. Just – as I have argued, and will continue to argue – CMT scholars must consider alternative hypotheses more in explaining their linguistic findings; so, too, must CMT critics create detailed, alternative explanations for the deep systematicity in the ways people metaphorically speak about certain abstract topics – including the way they do so in terms of recurring aspects of bodily experience.

At the same time, a wealth of psycholinguistic evidence is consistent with the idea that cross-domain mappings are inferred in contemporary understanding of conventional verbal metaphor. People do not interpret conventional expressions as having literal or non-metaphorical meaning. Consider just three examples from these studies. First, when people read a conventional metaphorical phrase such as 'John blew his stack', they appear to infer some connection with the underlying idea that ANGER IS HEATED FLUID IN A CONTAINER and also infer aspects about the cause, intentionality, and manner in which John's anger is experienced (Gibbs 1992). Second, when people read a conventional metaphorical expression such as 'their relationship was moving along in a good direction' – related to the metaphorical idea that ROMANTIC RELATIONSHIPS ARE JOURNEYS – they infer specific entailments from the source-to-target domain mapping: e.g., that the relationship was progressing forward along a straight line, with both participants heading in the same direction (Gibbs 2006c). Finally, other studies demonstrate that

reading conventional metaphors facilitates understanding novel metaphorical language, and that novel metaphors are comprehended more quickly when they are read after a story containing conventional expressions motivated by the *same* conceptual metaphor than when they follow conventional expressions motivated by a *different* conceptual metaphor (Thibodeau & Durgin 2008).

Contrary to the impression that many conventional expressions are not really metaphorical or evocative of cross-domain mappings, the psycholinguistic evidence shows how rich metaphorical mappings often arise when people interpret conventional verbal metaphor. This experimental evidence simply must be acknowledged and discussed in any further questioning about the metaphoricity of conventional language expressions.

4.3 Metaphor Language Does Not Imply Metaphoric Thought

Even if many conventional expressions ultimately are recognized as conveying metaphorical meaning, some critics suggest that this alone does not imply that speakers really are thinking metaphorically. Their complaint partly stems from concerns about a supposed circularity in CMT whereby linguistic expressions are analyzed and possible conceptual metaphors postulated, which are then reified by reference back to other language patterns: e.g., linguistic expression of conceptual metaphor entailments (Hauser 2005, Murphy 1996; see Kertesz & Rakosi 2009 for an analysis of how to decide if CMT is circular or not).

On this view, conventional verbal metaphors may just be ways of talking about non-metaphorical concepts. One of the earliest and most extensive arguments along this line suggests that Americans' frequent use of conventional metaphor in describing their marriages – e.g., 'we're stuck together pretty good' – should not be taken as evidence of a metaphorical concept for marriage (Quinn 1992). Instead, people use metaphorical language to highlight aspects of an underlying cultural model for marriage that is inherently non-metaphorical. Pinker (2007: 249) observes, 'people not only use conceptual metaphors, but often question and discount them'; 'people could not analyze their metaphors if they didn't command an underlying medium of thought that is more abstract than the metaphors themselves'.

Similarly, the different metaphorical ways that people often speak of abstract concepts suggests to critics that the underlying cognitive representations cannot really be metaphorical, because of inconsistencies between the entailments of the various metaphors (Murphy 1996). This assumes that conceptual representations must be monolithic: each part of a concept fitting together with other parts, like pieces of a puzzle.

Advocates of CMT have responded to the above criticisms, noting for example that human conceptual systems need not be internally consistent to be psychologically real and contextually adaptive. Choosing to speak using one metaphorical view as opposed to another does not require some single, non-metaphorical model from which different metaphorical expressions are generated (Gibbs 1994, Kovecses 2005). Again, the extensive psycholinguistic research on people's metaphorical understanding of

conventional expressions is consistent with the idea that various abstract concepts, many of which have embodied foundations, are truly metaphorical.

Critics of CMT who dismiss the metaphorical nature of abstract concepts have often argued that non-linguistic evidence is necessary to prove that metaphor really is part of ordinary thought and not just language (McGlone 2007, Murphy 1996). Non-linguistic evidence would help eliminate the problem of circularity that many critics say is inherent in most traditional cognitive linguistic analyses favouring conceptual metaphor. Of course, many studies in cognitive linguistic already show the ways people reason – and not just speak – with conceptual metaphor, in the areas of mathematics (Lakoff & Nunez 2002), history of philosophy (Lakoff & Johnson 1999), natural science (Brown 2003), and theories of mind in psychology (Gentner & Grudin 1985). Recent research on metaphorical gesture (Cienki & Mueller 2007), musical metaphor (Zbikowski 2002), and other multi-modal metaphorical expressions (Forceville & Urios-Aparisi 2009) firmly establishes that metaphor is not purely a linguistic phenomenon: many instances of metaphorical gesture and other non-linguistic actions have the same conceptual metaphorical roots, as seen in cognitive linguistic analyses of conventional and novel metaphorical expressions.[6]

Another place where evidence is rapidly accumulating on the non-linguistic nature of metaphorical thought is in many recent experimental studies in psychology. This work demonstrates how positive correlations in embodied experience appear to motivate people's social behaviour in a number of domains. Although these studies were not all motivated by CMT, their findings are consistent with what it has claimed about the metaphorical nature of conventional thought and experience, especially in regard to primary metaphors.

Consider the conceptual metaphors GOOD IS CLEAN and BAD IS DIRTY. Research shows that having people judge strangers' behaviours in a dirty work area causes them to rate the behaviour as more immoral than when the same judgments are made in a clean work area (Schnall, Benton & Harvey 2008). Asking people to recall an immoral deed as opposed to an ethical one makes them more likely to choose an antiseptic wipe as a free gift after the experiment (Zhong & Lilgenquist 2006).

There is also the broad set of metaphors suggesting that GOOD IS UP and BAD IS DOWN. Studies show that people evaluate positive words faster if presented higher on a computer screen and recognize negative words faster if they appear lower (Meier & Robinson 2004). People judge a group's social power to be greater when the judgments to choose from are presented at the top of the screen than when presented toward the bottom (Schubert 2005). When asked to move marbles from a lower to a higher part of an apparatus, people recalled positive memories more quickly than when moving the marbles in the other direction (Casasanto & Dijkstra 2010). Even spiritual concepts are conceived along vertical dimensions: people judge words related to God faster when presented in the top half of the screen, with

[6] See (Casasanto & Boroditsky 2008) for one set of studies that aim to counter the circularity argument.

the opposite effect for Devil-related words (Meier et al., 2007). Asked to guess which people, based on their pictures, are likely to believe in God, subjects more often choose those whose pictures are placed higher on the screen. All these findings are consistent with the idea that people conceive of good and bad as spatially located along a vertical dimension: a concept that arises from good experiences being 'up' (e.g., being alive and healthy) and bad ones being 'down' (e.g., being sick or dying).

Finally, studies show that people contemplating future events tend to lean forward as they do so, but backwards when thinking about past events (Lynden, Nind & Macrae 2010), consistent with the metaphorical concepts FUTURE TIME IS IN FRONT and PAST TIME IS BEHIND. People judge a fictitious person to be a better job applicant when they make their evaluations holding a heavy clipboard than when holding a lighter one (Ackerman, Nocera & Bargh, 2010) – which surely reflects the common idea IMPORTANCE IS WEIGHT. People judge others to be more affectionate after holding a warm as opposed to cold cup of coffee (Williams & Bargh 2008), expressing the basic correlation in experience AFFECTION IS WARMTH.

These are only a few of a large body of experimental studies in psychology that, in my view, directly answer past calls for non-linguistic evidence for conceptual metaphor. None of these findings should be at all surprising, given the claim that metaphor truly is part of one's underlying concepts – at least, many of the abstract ones – and fundamental to how people live and not just speak. Critics of CMT must acknowledge this work and respond whether it meets their long-stated demands for non-linguistic data.

4.4 CMT is Vague in its Claims about Metaphor Processing

The claim that pre-existing conceptual metaphors influence significant aspects of how people understand metaphorical language has been among the most debated in psychology research on figurative language interpretation (Glucksberg 2001; McGlone 1996, 2007). Some scholars argue that, even if enduring, entrenched conceptual metaphors exist, they may not always be accessible or ordinarily used in any given context of speaking and listening, writing and reading. Psycholinguists in particular believe this a fair hypothesis, given what they perceive as CMT's loose characterization of language understanding. Lakoff and Johnson (1980), and many others since, claim that conceptual metaphors function 'automatically' when language is understood; but this assumes that language understanding is a single, monolithic activity, with most evidence in favour of this claim coming from cognitive linguists' intuitions about systematic linguistic patterns. Psycholinguists trust none of this. They view the primary goal of a psychological theory of language understanding as trying to capture the precise, moment-by-moment processes that operate during immediate comprehension. Again, linguistic processing unfolds according to very fast unconscious processes operating outside people's ordinary conscious awareness. Experimental studies are needed, employing indirect methods, to properly assess whether people really are activating or recruiting conceptual metaphor during immediate verbal metaphor production and understanding.

These criticisms are entirely legitimate given that linguistic analyses are unable to discern what people are doing automatically and online during real-time use of metaphorical language. As I noted in (1994), the question of how conceptual metaphor affects language use can be individuated differently depending on whether one is interested in the evolution of language, people's conceptual ideas on certain topics, their tacit knowledge of why words and phrases have the metaphorical meanings they express, or the possibility that conceptual metaphor is recruited, in some fashion, during immediate language processing. Psycholinguistic studies have generally found that conceptual metaphors play a role in (a) people's tacit understanding of why many metaphorical words and phrases convey the meanings they do and (b) their immediate production and understanding of metaphorical language (Gibbs 1994; *in press a*). Meanwhile, several studies offer contrasting evidence and are used to argue against the putative role of conceptual metaphor in verbal language use, in regard to people's processing of both conventional and novel metaphorical language (Keysar, Horton, Shen & Glucskberg 2000; McGlone 1996). I will review some of these contrary findings and suggest my skepticism about their empirical adequacy (Gibbs *in press a*). Readers can judge the merits for themselves.

Even given the positive findings from experimental psycholinguistics – that conceptual metaphors are used immediately in many aspects of verbal metaphorical use – important questions remain for which CMT has not yet provided empirical answers. In general, many factors affect people's in-the-moment comprehension of metaphorical language. One possibility is that people should find it relatively easy to read verbal metaphors whose meanings are motivated by conceptual metaphors identical to those structuring the previous text. Under this hypothesis, people automatically access conceptual metaphors as they read and make sense of discourse. Activation of a specific conceptual metaphor facilitates comprehension of a verbal metaphor if that expression is motivated by the same conceptual metaphor, compared to reading a verbal metaphor motivated by a different conceptual mapping.

Still, none of this specifies precisely what role conceptual metaphor plays in verbal metaphor understanding. Consider the novel metaphorical expression 'my life as a professor has been one long, slow march through a windy desert'. CMT generally asserts that people understand this expression by accessing the underlying conceptual metaphor LIFE IS JOURNEY (or CAREERS ARE JOURNEYS). However, several questions can be raised as to how this may occur. Does a listener first access a complete conceptual metaphor from memory and then apply it to infer the metaphorical meaning of an expression? Second, if a conceptual metaphor is accessed prior to interpreting that expression, does it come with a package of detailed meaning entailments or correspondences that listeners infer as part of their understanding of what the expression means – or must listeners compute source-to-target domain mappings online to determine, in the moment, which entailments of the conceptual metaphor should be applied to the expression's meaning in context? Finally, conceptual metaphors may only arise as

products of linguistic understanding and so may not be necessary to create initial understanding of a statement like 'my life as a professor has been one long, slow march through a windy desert'.

CMT has no response to any of the above possibilities. Part of the problem, again, is that most linguistic discussions fail to acknowledge the different levels of understanding that may operate during language interpretation – ranging from slow, conscious interpretation of discourse to fast, unconscious processing of metaphorical meaning. Advocates of CMT can argue that the theory is basically correct in its claim that conceptual metaphor is part of language understanding and suggest that the questions above are details to be answered by future psycholinguistic research. That said, contemporary theoretical models of and empirical tests for online linguistic processing are frankly far more sophisticated than earlier ones advanced by CMT and have been tested in many psycholinguistic studies. If CMT is to be seen as a viable approach to verbal metaphor understanding, it needs to make better theoretical and empirical contact with both the extensive work on metaphor understanding in psycholinguistics, and current ideas about the dynamics of immediate language production and understanding debated in cognitive science: e.g., relevance theoretic, graded salience, parallel constraint satisfaction, and 'good enough' comprehension models. Empirical testing of CMT must specify more fully how other linguistic and sociocultural processes interact with people's knowledge of embodied conceptual metaphor to create meaningful interpretations of verbal metaphor, in context.

Finally, conceptual blending theory has often been seen as an important complement to CMT, given its emphasis on multiple mental spaces in creating metaphorical mappings and its attention to possible dynamic processes in online metaphor interpretation (Fauconnier & Turner 2002). There is much one can say about the benefits of blending theory; certainly, it has certainly generated a great deal of interesting research in linguistics and literary theory. Still, blending theory has had no significant impact on psycholinguistic studies of verbal metaphor understanding (but see Coulson 2006 and others of her papers). One problem is that blending theory offers descriptions of idealized speaker/listeners' full-blown understandings of language yet does not provide specific, detailed, unique hypotheses about understanding processes that can be tested readily in the laboratory.

4.5 Metaphors Are Not Embodied

The idea that many verbal metaphors are motivated by underlying conceptual metaphors arising from embodied experience is a key, novel contribution of CMT to current theories of metaphorical thought and language (Gibbs 2006a, Lakoff & Johnson 1999). Within CMT, the pre-conceptual notion of image schema is fundamental to accounts of metaphorical meaning: recurring patterns of bodily experience provide part of the motivation why words and phrases express their particular metaphorical meanings. A significant body of cognitive linguistic research explores the ways that image schemas shape metaphorical meaning (Hampe 2006), while various psycholinguistic studies demonstrate the importance of embodied

experience to explaining people's understanding of many metaphorical words and expressions (Gibbs & Matlock 2008).

There are several critiques of the general idea that metaphors are embodied and that aspects of metaphor understanding recruit embodied knowledge and experience (Rakova 2002). Some of this debate on embodiment in metaphorical language and thought parallels larger discussions in cognitive science about the very possibility of embodied cognition. Meanwhile, few metaphor scholars outside CMT embrace embodiment as a key part of their theories.

One finds significant debate and discussion *within* CMT about the proper level of analysis in making claims both for conceptual metaphor more generally and embodied conceptual metaphor more specifically. Consider some of the ways conceptual metaphor has been studied and thought to have an influence:

1. Cultural models of abstract concepts (Yu 2008).
2. Evolution of language (Sweetser 1990).
3. Contemporary language as manifested in conventional expressions, novel extensions, polysemy, and textual organization, as well as gesture (Gibbs & Steen 1999, Lakoff & Johnson 2003, Forceville & Urios-Aparisi 2009).
4. Contemporary speakers' knowledge in long-term memory – structuring many abstract concepts – that motivates their tacit understanding of why various words, phrases, and texts convey the figurative meanings they do (Gibbs 1994).
5 Contemporary speakers' knowledge in long-term memory that is immediately recruited – accessed or activated – during online metaphorical language production and comprehension, as well as different reasoning tasks (Gibbs *in press a*).
6. Neural processing underlying abstract thought and language performance (Feldman 2006, Lakoff 2008).

Significant research from linguistics, cultural anthropology, psycholinguistics, and neuroscience provides empirical support for each of these areas. CMT scholars typically focus on the 'where is it' question, arguing 'it is here' or 'not there' depending on their disciplinary interests and empirical analyses. For example, many CMT scholars appear to reject the neural theory of metaphor (Lakoff 2008) , because it seems both completely reductive and irrelevant to the level they feel is most appropriate for studying conceptual metaphor. One difficulty with much of the debate over where conceptual metaphor resides and what level best expresses its embodied character is that traditional cognitive linguistic analysis of the embodied foundations of metaphorical meaning assumes that information about embodiment – such as image schemas – is 'stored' in a dormant state as a predefined, discrete neural configuration – or ensemble of neural configurations – waiting to be selected from a set of other dormant, discrete neural

configurations to be actively thought about. This belief arises, in my view, because of the flat schematic diagrams, consisting of boxes, circles, and arrows, employed in cognitive linguistics to represent the contributions that image schemas and embodied conceptual metaphors have in motivating linguistic structure and meaning. Such a view downplays how mind and experience emerge from the continual interactions of brain, bodies, and world as a fully-lived organic system.

Image schemas may be better thought of as basins of attraction within a self-organized system involving the interplay of brains, bodies, and world (Gibbs 2006a). On this view, image schemas are not localized representations but emergent patterns of entire systems in action, including neural systems. They always retain their connection to people's in-the-moment sensorimotor experience. One does not experience image schemas or conceptual metaphors by 'selecting' one as opposed to another from a stored list. Image schemas and primary metaphors are 'soft assembled' spontaneously given the present state of the system, the wider context, and the task at hand, such that the speaker creates an immediate construal of the bodily based idea that *not* understanding something is like *not* seeing it (Gibbs *in press b*).

Recently, I have argued that a self-organizing perspective on human cognition and performance suggests how conceptual metaphors are sustained on multiple time scales, emerging within an endlessly evolving hierarchy of dynamic processes (Gibbs, *in press a*, *b*). Each of above-listed levels of conceptual metaphor operate on different time scales: some, such as evolutionary and historical forces, crawling along at very slow speeds, others, such as the firing of neurons in the human brain, zipping along. The various time scales are not independent but rather hierarchically organized, nested within one another such that various forces affecting metaphorical experience are coupled in complex, nonlinear ways. What the contents of conceptual metaphors are – i.e., their target and source domains and correspondences – and when they emerge are perpetuated, in time, via circularly causal dynamics involving constraints that are both top down (e.g., evolutionary, cultural, and historical forces) and bottom up (e.g., neural processes).

A self-organized view of metaphor does *not* assume that historical and evolutionary forces play no role in people's contemporary use of language. Neither does it assume that neural firings or mappings serve as the primary causal basis for the ways people think and talk metaphorically. All the factors that make up one's self-organized experience continually contribute to the creation of metaphorical meaning. One implication of this is that scholars cannot claim one level of experience – from culture to neurons – provides the primary causal basis for metaphorical thought and language. Instead, they must acknowledge how many forces interact to create in-the-moment metaphorical thinking, language, and action.

5. SOME IDEAS ON THE FUTURE OF CMT

CMT has been enormously influential within a variety of academic disciplines but still suffers from problems that, unfortunately, prevent it from being more widely adopted. Personally, I enjoy the multiple ways that metaphor is studied and do not aspire to make CMT the only theory of metaphorical thought,

language, and culture. Nevertheless, CMT can do much more to facilitate its positive perception both in metaphor studies and the broader cognitive science community. Let me broadly outline five challenges that CMT faces and that demand explicit attention in future research.

First, CMT practitioners should be far more explicit about the ways they perform their linguistic analyses of language to infer conceptual metaphors. This will require greater emphasis on what, specifically, marks a word or phrase as metaphorical and what specific factors mark a group of words, linguistic, or gestural expressions as evidence for specific conceptual metaphors – and not others. Establishing criteria for determining what is metaphorical and what constitutes proper evidence for conceptual metaphor will create a more satisfactory empirical basis on which to judge the theoretical merits of CMT and offer metaphor scholars a firmer foundation on which to make claims or counterclaims about the ubiquity of metaphor in language and thought.

Second, CMT scholars should seek to integrate the findings from linguistic analyses with those obtained by corpus, behavioural, and neuroscience-based research methods. As much as CMT embraces the idea that language relates to cognition and experience, many scholars working in the framework do not establish connections between their own empirical studies and those of people in other disciplines. Of course, understanding the research and methods of people working in other fields is quite challenging. My argument in favour of a self-organizing view, in which conceptual metaphor emerges from the unfolding of experience operating on different time scales, demands consideration of research findings relevant to all these time scales – again, ranging from evolution and culture to fast-moving unconscious processing and neural activity. Neuroscience research demonstrates how brain physiology allows for the flexible transition between ordered and disordered states that are also seen at higher levels of individual and social behaviour (Friedenberg 2009). Metaphorical behaviour does not reduce to specific brain states; yet the dynamic properties of neural systems offer compelling correspondences to the unfolding of stabilities and variabilities in people's metaphorical thoughts and communicative actions.

This is just one area in which greater acknowledgement of research outside linguistics and psychology may be beneficial to future progress in CMT. Some CMT scholars *are* using multiple methods in their research: integrating predictions and findings from linguistic and corpus studies, corpus and behavioural studies, and behavioural studies and neuroscience experiments. At the very least, scholars working in almost any area of CMT can offer ideas on the relevance of their research to making new empirical predictions in other domains of study, from understanding the unfolding of metaphorical meaning at the linguistic level to mapping possible neural processes. This will require greater familiarity with the empirical work and methods employed in other areas of CMT.

Third, CMT scholars need to better articulate what empirical hypotheses and experimental predictions arise from more linguistic analyses of metaphor. What kinds of evidence can, in principle, falsify the underlying tenets of CMT, and how can one best create empirical tests of these ideas? How and

why does CMT account for certain bodies of data better – or worse – than other extant theories of metaphor and meaning? Answering these questions is critical to increasing the theoretical and empirical power of CMT in the interdisciplinary world of metaphor research.

Fourth, CMT needs to explore alternative explanations for the data collected in support of the theory. CMT originally arose from cognitive linguistic research, which directly opposed classic generative approaches to linguistic structure and behaviour. For much of the past thirty years, CMT advocates have tried to push this new perspective as far as possible in explaining myriad aspects of language, thought, and culture. Now CMT comes across as theoretically isolated, precisely because it rarely considers alternative explanations for its findings and does not sufficiently explore other extant theories of metaphorical thought and language even as its presumes to advance the study of metaphor. This failure to acknowledge and discuss alternative views – a problem inherent in generative linguistics more generally – appears to many in the humanities and cognitive sciences as pure arrogance. That leads many scholars to dismiss CMT out of hand, without sufficient consideration of its claims and evidence. I think this is CMT's greatest rhetorical and intellectual weakness.

Finally – related to the last point – CMT needs to be more open about what it cannot accomplish – either because of its methodological choices or simply because no single theory may be capable of explaining *all* aspects of the complex phenomena that are metaphorical language and thought.

I articulate these challenges as a clear friend of CMT, yet as someone who senses great frustration among scholars over some of the research and writings in CMT. I suggest that everyone talk more about these issues and make the next thirty years even greater than the wild ride metaphor researchers have experienced so far.

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Metaphor and the Communicative Mind

On the occasion of the thirtieth anniversary of the first cognitive-semantic theory of metaphor – *Metaphors We Live By (*1980) – this paper presents a communication-oriented perspective on the practice of metaphor analysis. Through discussion of contemporary metaphor theories, it identifies a number of unresolved issues. Among these are the notions of *domains*, *mental spaces* and *binding*, the unidirectionality hypothesis, the emergence problem, the significance of pragmatic context, and the philosophical status of representations. The theories discussed are conceptual metaphor theory, conceptual integration theory, the neural theory of language, the attribution model of metaphor, semiotic integration theory, and relevance-theoretic approaches to metaphor including the hybrid theory of metaphor. Comparing analyses and explanatory frameworks, the paper offers a theoretical and methodological critique of these approaches – as food for thought and fuel for prospective future research projects in cognitive linguistics and beyond.

Key words: domains, emergence, force dynamics, mental spaces, metaphorical meaning, pragmatics, semantic framing.

1. COMMUNICATIVE INTENTIONALITY: A BLEND OR A PRIMITIVE?

The last few decades have witnessed increasing awareness of the social dimension of language[1] – moving away from the analytical, symbol-oriented first wave of the 'linguistic turn' toward a more usage-oriented view. This has been partly inspired by an accumulating corpus of work on shared conceptual structures underlying language and the 'cognitive turn' in the humanities, but also precipitated by linguists and philosophers in the late '50s and '60s taking an interest in what people *do* with language (Austin 1962, Benveniste 1966, Grice 1968, Searle 1969) – contesting theories of language that disregard its social motivations. Benveniste, a key figure in developing the concept of enunciation in linguistics – the act of addressing utterances to an addressee – dedicated parts of his 1966 book[2] to what he called *the presence of man in language*: directing attention to the subjectivity

[1] Among recent publications see for e.g. (McNeill 2005, Tomasello 2006, Zlatev *et al*. 2008, Gallagher 2009a [citing, among others, Thomson & Varela 2001]). Gallagher writes (2009a: 48): '...cognition is not only pragmatically situated but also always socially situated, not simply in the sense that the world is populated with others with whom we communicate but also in the sense that this communication and interaction shape our cognitive abilities from the very beginning. They push us to realize that cognition not only is enactive but also elicited by our physical and social environment; that it not only involves a deeply embodied and temporally structured action but also is formed in an affective resonance generated by our surroundings and by others with whom we interact'. See also (Harder 2010).

[2] Appearing in English as (Benveniste 1971).

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inherent in – and entailed by – the way language presents itself in the form of utterances, in the *uttering* of sentences with the dimension of situatedness that this circumstance entails.

The commonsensical – yet somewhat theoretically novel – view of language as inherently dialogical and socially conditioned finds support outside linguistics as well, appearing in neuroscience and developmental psychology. The emergence of a 'social neuroscience' is especially noteworthy – particularly the research on mirror neurons, supporting a view of human beings as fundamentally attuned to interpersonal interaction while inspiring new hypotheses on the origins of language such as the hypothesis proposed by Gallese (2007) that grounds meaning in the social experience of observed or imagined intentional action. As Gallagher has suggested (2001, 2007, 2008, 2009b), mirror neuron research may even point to a notion of *the Other* as more primary than the Self[3] – contrary to the widely held belief, e.g. in much work on theory of mind, that *the Other* derives from the (primary) Self.

Psychology has similarly turned toward the development of social cognition in interactive settings,[4] monitoring and assessing the intelligence and emotive responsiveness involved in turn-taking interaction in studies such as. Trevarthen's (1994, 1995, 1999) observations of markedly *rhythmic*, vocally and gesturally implemented dialogue behaviour in pre-linguistic infants. These studies indicate attunement to the causality of *communicative intentionality* at a very early stage of development and evidently even earlier than attunement to *physical* causality. As is apparent in Trevarthen's video recordings of infant-caretaker dynamics, even babies born two months premature spontaneously engage others in interactive proto-conversation. 'The dynamic patterns of feeling in protoconversation in which the infant follows and joins in rapidly transforming expressive sequences, give the clearest evidence that each human mind is innately organized for intersubjective participation with the interests and feelings of another human mind'. (Trevarthen 1994: 230)

Trevarthen's work indicates that the very *uttering* of utterances – their rhythmic emission in anticipation of rhythmically unfolding turn-taking events – is developmentally prior to syntax and semantics, as well as the conceptualization and vocal actualization of words needed for speech to occur. Indeed, the referential function of language appears to be secondary to the 'enunciational' feat of addressing another person: '…the syntax of verbal expression in speech and text is derivative of, or

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[3] This is 'intrinsic intersubjectivity' or the 'intersubjective first' position (Trevarthen 1999: 417). Meanwhile, Gallese (2005: 43) writes: 'the sharp distinction, classically drawn between the first- and third-person experience of actions, emotions, and sensations, appears to be much more blurred at the level of the sub-personal mechanisms mapping it. The gap between the two perspectives is bridged by the way the intentional relation is functionally mapped at the neural-body level. Any intentional relation can be mapped as a relation holding between a subject and an object. The mirror neural circuits described in the second part of the paper map the different intentional relations in a compressed and indeterminate fashion, which is neutral about the specific quality or identity of the agentive/subjective parameter. By means of a shared functional state realized in two different bodies that nevertheless obey the same functional rules, the "objectual other" becomes "another self "'. Conversely, one could also say that the self is 'another other'.

[4] See e.g. Ask Larsen's (2003) step-by-step analysis of situated sign-making interaction between congenitally deafblind children and their caretakers.

built upon, a nonreferential process that regulates the changes and exchanges of motivation and feeling between subjects in all communication where cooperative awareness is being created' (Trevarthen 1994: 230). In this way, enunciation is primitive, more basic than utterances – than requests, statements of fact, or whatever else utterances may serve to convey in communication. *Attunement to others* is at the core of language.[5]

The primacy of the preoccupation with semiotic exchange – the child's emission of intentional signs in anticipating the enunciation of the *other* – suggests that enunciation is not only central to the study of meaning but is *more basic than meaning construction itself*. From an ontogenetic viewpoint, it is food for thought that basic rhythmic turn-taking is mastered long before the infant starts exploring its physical environment. Given a responsive environment, *communicative intentionality* is an immediately expressed competency in human cognition and agency.

Insights such as these contribute to a growing pile of evidence that the intentionally motivated pragmatic domain of *conversational interaction* is not an abstract, 'less accessible' domain in human ontology, as assumed, e.g. by Lakoff and Johnson (1980, 1999) – not to mention virtually every cognitive science department around the world.

To take a representative example, in *Philosophy in the Flesh*, intentionality is seen as the result of the blending of two metaphors (Lakoff & Johnson 1999: 216). The prevalent – indeed, dominant – assumption is that all conceptualization is shaped by the infant's experience of its physical environment. Consequently, non-physical concepts are seen as derivative, 'building on' the conceptualization of physical primitives – e.g., 'primary metaphors' – while forming abstractions of increasing complexity.

2. SEMANTIC DOMAINS AND THE QUESTION OF DIRECTIONALITY

The idea that bodily experience of the physical environment is constitutive of conceptual development – to the exclusion of other forms of experience, including the experience of one's body and the bodies of others responding to gesture and touch, events of intentionality-laden agency – is tied to the 'grounding hypothesis' (Lakoff & Turner 1989: 112-120), according to which meaning goes in the direction of concrete-to-abstract along a spectrum from physical to non-physical. A feature of contemporary notions of *embodiment* in cognitive linguistics (CL), it is characterized by Rohrer (2007) in terms of *unidirectionality of explanation,* in answering the question of what domains can serve as source domains in conceptual metaphor (*cf*. Lakoff & Johnson 1980).

The environment furnishing one's conceptual 'architecture' with semantic structures available for metaphorical usage is sometimes referred to as a physical *and social* environment – Lakoff, for one, has emphasized this on several occasions. Nevertheless, it has not been made clear what theoretical

[5] See also the reference to the concept of "intentional attunement" in Gallese (2005): "[...] when the organism is confronting the intentional behavior of others, it produces a specific phenomenal state of "intentional attunement"." (p. 43).

implications follow from the inclusion of social aspects of experience – and, hence, conceptualization. A prominent empirical paradigm – motivating the theoretical estimation of the directionality of metaphor – relates the study of source and target domains to the study of concepts underlying *motor-action verbs* like 'to grasp': e.g., '…a ball' or, metaphorically, '…an idea'. Gallese & Lakoff (2005: 470), drawing on research in neuroscience – particularly research on the role of canonical and mirror neurons in the observation and execution of deliberate action – conclude that 'the concepts characterized in the sensory-motor system are of the right form to characterise the source domains of conceptual metaphors'. This may be true.[6] However, so long as the methodology reveals a bias toward certain *kinds* of action verbs – namely, those that designate object-oriented action and perception – the inferred results will be similarly biased. The neural theory of language, as represented by Gallese and Lakoff, may be jumping the gun on the issue of grounding. The inferred assumption of only one 'right' form to characterize source domains is (logically) premature, deriving its argument from a methodologically constricted body of data.

One gets an incomplete view of language if one looks only at concrete action verbs and disregards linguistic units that designate actions defined by their mental effects and by their significance in social settings: i.e., actions that require *interpretation*. These include social, 'institutional' verbs like 'to vote' as well as verbs designating actions in the domain of communication: e.g., so-called speech-act verbs like 'to promise', 'to greet', 'to congratulate', etc. The potency of face-to-face communication as a source domain in metaphor is apparent in the use of speech-act verbs to express force-dynamic relations outside the domain of speech acts: i.e., when verbs like 'threaten', 'promise', or 'suggest' are applied to the weather or some other phenomenon of a non-communicational – e.g., physical or inferential – nature.

Metaphorical language use of this sort is not, of course, restricted to verbs; it employs other parts of speech: nominal, adverbial, and adjectival derivations such as a 'threatening' sky. Consider this sentence, in which the noun 'answer' conveys a perceptual experience: 'the hills humping up behind the beach were a shrill green hue, vivid and outrageous, an angry answer to all of that gray water that lay before them'.[7] Note the metaphorical description of the hills as an 'angry answer' to the tepid water. Such metaphors illustrate that the direction from source to target domain can go from non-physical to physical, calling into question the empiricist assumption that the semantic domain of

[6] Willems and colleagues (2009) criticize the neurolinguistic claim that semantics is all about motor neurons, based on results showing neural dissociations between action-verb understanding and motor imagery. The authors used fMRI to test whether implicit simulations of actions during language understanding involve the same cortical motor regions as explicit motor imagery. They found that the primary motor cortex showed effector-specific activation during imagery but not during lexical decision.

[7] The example comes from W. Tower's (2004) story 'Everything ravaged, everything burned'.

communicative face-to-face interaction (*aka* the speech-act domain: Sweetser 1990[8]) reduces to a host of more complex and abstract concepts derived from physical experience.[9]

Similarly, the verb 'to interrupt' can address one's field of vision – one's view may be interrupted by trees, statues, or billboards; or maybe one cannot enjoy the view 'thanks to' certain obstructions. Going in the same direction from the domain of communicative interaction to the physical domain, the verb 'to disagree' can be used to talk about digestion: a meal may 'disagree' with someone.

At the more sophisticated end of human experience, a painting or piece of music may 'speak' to someone. *Saying* and *telling* are likewise commonly used to signify that something is indicated: e.g., 'what does that *tell* you?' Such metaphors go from the domain of face-to-face interaction to the mental domain of making inferences: the *epistemic* domain (Sweetser 1990).[10] Sweetser offers an etymological example of semantic drift that does not comply with the unidirectionality rule: the French word for 'listen'/'hear': *entendre*, belonging to the physical domain, which originally denoted *intentionality*. This and similar observations manifest a propensity for non-physical domains to act as source domains in conceptual and expressive constructions of metaphorical meaning, 'speaking' against the unidirectionality hypothesis by which all meaning is rooted in the physical domain.

That face-to-face communication is a prolific semantic resource is evident in a variety of ways. Brandt (2013) offers an extensive argument, based on wide and varied empirical observation of language use, for the significance of the basic pragmatic condition of verbal interaction (*cf*. the linguistic notion of *enunciation*) as a factor in language at every level of complexity, and the inclusion of the utterance as a structural element in semantic analysis, e.g. in the analysis of metaphors. One line of evidence comes from Pascual's introduction, into CL, of the novel notion of *fictive interaction* (2002; see also 2006, 2008; Brandt 2008, 2010, 2013): a linguistic phenomenon exposing the

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[8] For Sweetser (1990), this is both a *metalinguistic* and a *speech-act* domain.

[9] One has yet to see any step-by-step description of how abstract concepts derive from physical primitives: e.g., how the concept of *someone answering someone* might plausibly originate in experience of concrete physical circumstances and, thus, how concepts requiring an understanding of intentionality derive from experience of non-intentional aspects of reality.

[10] The difference in domain types helps explain the polysemous use of certain linguistic units: e.g., why the modal verb in 'that can't be right' (epistemic force) means something different than it does in 'you can't park here' (social force) or 'the dam can't hold the water back' (physical force). Sweetser's work on modality takes inspiration from Talmy's (2000) force-dynamic modeling of causation. In a chapter inspired, in part, by Talmy's approach to deontic modality and causality in terms of forces and barriers (*cf*. *force dynamics*), Sweetser sets forth (1990: 73) an 'analysis of linguistic modality as being generalized or extended from the real-world domain to the domains of reasoning and speech acts'. '…It seems evident that a modal verb may be interpreted as applying the relevant modality to: 1. the content of the sentence: the real-world event *must* or *may* take place; 2. the epistemic entity represented by the sentence: the speaker is forced to, or (not) barred from, *concluding* the truth of the sentence; 3. the speech act represented by the sentence: the speaker (or people in general) is forced to, or (not) barred from, *saying* what the sentence says' (1990: 72-73). The polysemy between different senses appears as the conventionalization of a metaphorical mapping between the root domain of social and physical reality (the *sociophysical domain*), the epistemic domain, and the speech-act domain motivating metalinguistic language use: e.g. 'I must say…'. The speech-act domain is, perhaps, more accurately described as the domain of 'the act of speaking' itself: i.e., *discourse* (1990: 57).

prominence of pragmatic experience in human cognition.[11] These studies in structural aspects of situated language use demonstrate the status of verbal interaction as a resource in grammar and in mental-space blends, at the linguistic level of *discourse*.

Research on the role of communication / enunciation / verbal interaction as semantic resources challenges widely held beliefs in CL as well as current theories of metaphorical cognition and language use, such as:

- *The primacy of the physical domain*: in the empiricist tradition of contemporary cognitive science, physical experience is thought to be more concrete, more basic, and more easily accessible than other forms of experience. This belief is of import to another contemporary dogma, which I have not seen contested or critically discussed anywhere: that of the directionality of 'sense transfer' in metaphor (from the Greek *meta-* 'over', 'across' + *pherein* 'to carry', 'to bear'), from one semantic domain to another.
- *The unidirectionality hypothesis*: meaning flows unidirectionally from the physical domain to the domains of social activity and relations, epistemic activity such as reasoning, and communicational or metalinguistic activity. The hypothesis claims that the source domains in metaphor can be characterized as more concrete than the target domains and that, in terms of semantic domains, the direction goes *from* the physical domain to other, more abstract domains. Given the proposed 'upward movement' of language, from the physical to the 'spiritual' (see e.g. Urban 1939), the abstract concepts of people's social, interactional, emotional, and mental lives can be traced back to origins in sensorimotor experience of the physical environment. Though counterexamples have been documented – e.g., Lakoff & Turner note (1989: 142) that 'it is common to speak of lines "converging" or "meeting", as if they were moving'[12] – they are not recognized as counterexamples.
- *The notion of* **domain**: what does the term 'domain' refer to in CL in relation to e.g. metaphor? Considering the different usages, it is far from clear what phenomena are covered.

An example illustrates the problem: say one wants to investigate some aspect of the brain's processing of metaphor. One must first decide what counts as metaphor: i.e., what data to admit in setting up the experiments. One must choose a method for distinguishing metaphors from other kinds of phenomena. The notion of domain – e.g., experiential, semantic, and conceptual domains – is central to contemporary theories, but the task of specifying what constitutes a domain gets little or no attention. Experiments assuming Conceptual Metaphor Theory (CMT: Lakoff & Johnson 1980, Lakoff 1987) as their theoretical base look for instances of structure being transferred from a source to a target

[11] The phenomenon is known as *fictive* (verbal) *interaction* in (Pascual 2002) and as *generic* vs. *fictive verbal interaction* or *generic* vs. *fictive enunciation* (i.e., two types) in (Brandt 2008, 2013) .

[12] 'Meeting' is a social concept and does not merely indicate movement.

domain.[13] The conceptual structure MORE IS UP is said to constitute one such instance. The problem is that, when one considers the source and target elements of this 'primary' metaphor, neither 'more' nor 'up' constitute experiential domains – or semantic domains for that matter; these are *schemas* – skeletal, dynamic schemas that are potentially active in all experiential domains (e.g. those of architecture, archery, argumentation, hunting, cooking, traveling, and so on).

Conceptual confusion surrounding the notion of domain cannot be ascribed to terminology alone. If one takes some of the varied uses in the CL literature under consideration, it becomes apparent that considerable effort will be required to sort them out. One such use is found in Fauconnier's (1994 [1985], 1997) theory of mental spaces, anticipating later use in Conceptual Integration Theory (CIT: Fauconnier & Turner 1994, 2002). It is not made clear what the notion of domains is intended to encompass; but the spaces introduced by the theory are sporadically referred to as domains.

Aside from a finite number of domains of phenomenal reality: *semantic* – or, as I would call them, *ontological* – domains[14], and a non-finite number of experiential domains constituting e.g. source and target domains in conceptual metaphor), Fauconnier adds two further uses of 'domain'. '*Mental spaces* are the *domains* that discourse builds up…' (1997: 34, *emphasis added*). Each space is associated with a certain domain: be it a *time* space, a [physical] *space* space, a *domain* space, etc.[15] One thus ends up with semantic, or 'ontological', **domains** within which there are experiential **domains** feeding **domains** (read: *mental spaces*) associated with different **domains** (types of spaces: e.g., 'hypotheticals' or 'beliefs'). Add to this the identification of *schemas* as *domains*,[16] and one is up to five different senses. If all these senses are employed at once, one gets domains specifying domains structured by domains containing content from domains grounded in domains.[17]

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[13] The paradigm has survived into the new millennium in linguistic, literary, and computational studies around the world (see Feldman & Narayanan 2004). Thirty years on, it has had to withstand some tweaking, not least from the founders themselves. Some of its tenets have been modified by Fauconnier & Turner's work (2002) showing, among other things, that the *transfer* metaphor inherent in the concept of metaphor itself has limitations.

[14] These are identified as *socio-physical*, *epistemic* and *speech-act* domains in (Sweetser 1990). The term 'ontological domain' is an adaptation of Sweetser's idea of 'semantic domains', which are fixed in number, as opposed to 'experiential domains' which are as numerous as the differing individual, context-dependent, historically and culturally determined framings of what exists. *Ontological domains* are based on cognitively universal distinctions between different phenomenal realities: e.g., physical versus social reality or social reality (work, traffic regulations, etc.) versus the intimacy and ethics of face-to-face communication (the speech-act domain). The question of what ontological (or 'semantic') domains exist is thus a question of natural ontology: a phenomenology of the world as experienced by humans. For more on 'semantic domains' in this ontological sense, see Brandt (2004: 21-67). Brandt distinguishes four basic semantic domains: *natural* (physical) (D1), *cultural* (social) (D2), *mental* (D3), and *spiritual* (speech-act) (D4); these domains combine into 'satellite domains'.

[15] Assume that the domains in *domain spaces* are experiential domains.

[16] *Cf*. Lakoff's classification of abstract, 'image-schematic' structures as experiential domains: e.g., a domain of paths, a domain of barriers, a domain of bounded regions.

[17] Yet another sense of *domain* exists in *cognitive grammar* (Langacker 1987): the meaning of 'thumb' or 'finger' is understood in relation to the domain 'hand': a domain evoked by the profiled element. Harder (2010:

3. METAPHORIC PREDICATES AND METAPHORIC BLENDS

As a point of departure, all theories I discuss in this paper agree that metaphors are fundamentally a conceptual rather than linguistic phenomenon, pervasive in human cognition and language. Most take a primary interest in the conceptual rather than the expressive aspect of metaphor,[18] and most agree on a basic distinction between literal and metaphorical processing.[19] Talmy writes (2000:168):

> The very characteristic that renders an expression metaphoric – what metaphoricity depends on – is the fact that the speaker or hearer has somewhere within his cognition a belief about the target domain contrary to his cognitive representation of what is being stated about it, and has somewhere in his cognition an understanding of the discrepancy between these two representations.

In the last ten years, some theorists have moved away from CMT, while others have made efforts to integrate elements of CMT into newer theories like Conceptual Integration Theory (CIT) or Relevance Theory (RT).[20]

Tendahl & Gibbs (2008: 1837) propose a hybrid network model with five spaces, consisting of both experiential domains and mental spaces. Though stated as fact, the model must be taken as a very sketchy hypothesis that would benefit from more careful explication. The most glaring question is how it is possible for direct mapping between domains and spaces to take place, given that a (mental) space is commonly understood as '…a partial and temporary representational structure which speakers construct when thinking or talking about a perceived, imagined, past, present, or future situation. Mental spaces (or, "spaces", for short) are *not equivalent to domains*, but, rather, they depend on them: spaces represent particular scenarios which are structured by given domains' (Grady, Oakley & Coulson 1999: 102, *emphasis added*).[21]

As I have demonstrated, the status of *domains* is uncertain. Furthermore, it is not entirely clear what *spaces* are[22]; as Hougaard (2005) points out, it is unclear what all the phenomena classified as 'spaces' have in common.[23]

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39) writes: 'from the point of view of language, a very basic question is: what precisely is the meaning of a linguistic expression? [Cognitive Linguistics] has not spent a great deal of time worrying about the question, probably because that was something truth-conditional semanticists did. The most generally accepted position is that of Langacker (1987: 161*f.*): while an expression evokes the whole domain, it only specifically *designates* the profiled subpart. The word *daughter* evokes the family domain, but only designates the female offspring – and therefore the female offspring is the point of access to the domain. Thus an individual linguistic concept may be thought of as a "point-of-access" to something that is necessarily bigger than the concept itself'.

[18] Semiotic integration theory (Brandt & Brandt 2005 [2002]; see also Pascual 2002, Hougaard 2005) is an exception .

[19] Relevance Theory (Sperber & Wilson 2008) is an exception.

[20] See Tendahl (2009) and Brandt (2010, 2013).

[21] Mental spaces are 'small conceptual packets constructed as we think and talk, for purposes of local understanding or action' (Fauconnier & Turner 2002: 40). However, these 'packets' are likewise claimed to be generated by blended spaces (Fauconnier & Turner 1999: 3).

[22] See Chapter Three in Brandt (2013) for in-depth discussion of mental spaces.

Current developments in NTL make these questions all the more relevant. According to a 2010 posting by Lakoff on the 'cogling' mailing list, the issue is coming up 'as to how ECG and NL approaches should use simulation semantics to update mental spaces, keeping all of the correct results from the work of Gilles [Fauconnier] and others'. By what criteria should these spaces be identified, and what is the method for deciding which results are correct? So as to trace progress instead of merely moving on, it would be enlightening to see more discussion of how the different theories relate and what novel insights or beliefs motivate theorists to abandon – or leave out – ideas present in prior work or sister theories. To my knowledge, the topic of semantic domains has not been addressed in relation to metaphor since (Sweetser 1990), while the idea in CMT of experiential or semantic domain differences between source and target has not been addressed in CIT. There are plenty of unanswered questions, the answers to which might help scholars decide not just what they believe but why. Writing on recent developments in metaphor theory, Kövecses (2009: 22) says:

> All the theories and approaches considered here *contribute to* an account of the meaning of metaphorical sentences such as 'This surgeon is a butcher'. No single theory explains everything about the process of meaning construction required for the sentence. In this sense, the different theories fit together and complement each other in a natural way.

The title of the paper is 'Recent developments in metaphor theory: Are the new views rival ones?' One would hope not! What struck me was the framing of theories as prospective *rivals*. Such combative framing leaves theorists with two unattractive options: defending indefensible ideas or being *defeated*; making the third alternative – avoiding confrontation – more appealing. Framing in terms of rivalry unwittingly entails an evasive attitude and an atmosphere of euphemistic complacency that are antithetical to the goal of scientific progress. Replacing the competitive framing with a cooperative one of dialogue seems more productive and intellectually satisfying. Engaging in argumentational dialogue means enabling each side to anticipate counterarguments and give each other opportunities to refining theoretical frameworks. In my estimation, facilitating a process of deliberation and judgment is a better alternative than prospects of victory or defeat and an unrealistic pressure, socio-scientifically speaking, to get every part of a theory right the first time.

In their paper on conceptual blending and metaphor, Grady and colleagues (1999) characterize CMT and CIT as complementary approaches to metaphor, noting that the two theories differ with respect to their focus of attention: entrenched conceptual structure – global and static meaning – on the

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[23] "…Surprisingly little attention is dedicated to discussing what mental spaces in fact are. Fauconnier and Turner (2002a) only dedicate 1 out of 400 pages to this issue. In fact, most of the time when mental spaces are introduced in some context, this is done by discussing what they are not (as in Fauconnier 1994) or by giving examples of mental space constructions, not by offering actual technical and/or philosophical definitions. Blending theory has made the issue of what mental spaces are very urgent. Many different things are put into mental spaces: conceptual structure, perceptual structure, linguistic form, single objects, structured scenarios, unstructured scenarios, very rich and complex scenarios, very simple scenarios, sound, physical form, color, emotion, etc. However, what do all these things have in common? The answer may of course be that they are all mental, but this then potentially entails that practically all mental processes are also mental spaces. This is a gross generalization, and what insight does it give if it places everything in the same category?' (Hougaard 2005: 57)

one hand, online meaning construction – local and dynamic meaning – on the other. CMT is vulnerable to the critique that utterances are of interest only insofar as they serve as data for uncovering conceptual metaphors: an incomplete strategy of analysis as e.g. in literary studies. CIT has emphasized the pragmatic dimension of meaning; it includes, in its data, metaphors – among other examples of empirically observed or imagined speech – that do not originate in systematic conceptual pairings and whose motivation may be rhetorical as e.g. in humor (Coulson 2001). For Brandt and Brandt (2005), answering the question of what a metaphor means similarly lies in exposing, not underlying conceptual metaphors, but the conceptual process of meaning construction and interpretation.

One might get the impression that different theories are simply not asking the same questions; but the sum of theoretical differences between CMT and CIT can hardly be accounted for solely by reference to the general attentional shift from conceptual metaphor – source/target structures – to dynamic online construction of metaphor: i.e., instances of metaphor, whether derived from stable metaphorical concepts or not. Postponing judgment on whether – as Grady and colleagues (1999) and Kövecses (2011) suggest – the theories represent complementary approaches, I suggest looking at some of the things one notices when familiarizing oneself with them.

Like the neural theory of metaphor, CIT is a general theory of language and thought; metaphor is one of many phenomena subsumed under a descriptive model of conceptual integration. Whereas in CMT metaphors are defined by a T-is-S structure, no characteristic structure exists in CIT specifically for metaphors: they are not classified e.g. solely as simplex or double-scope blends. Metaphorical blends result from multiple 'inputs' merging into novel, temporary semantic units structured in accordance with a number of optimality principles (Fauconnier & Turner 2002: 327-333). All blends are characterized by constrained mappings between spaces in a conceptual integration network, yielding emergent meaning in a blended space. No set of criteria exists for distinguishing utterances that prompt for metaphorical blends from other forms of expression.

Since no domain differences in CIT differentiate metaphors from other semantic structures,[24] CIT replaces CMT's directional view of projection from source to target with a non-directional view, where the projection goes from a number of inputs – minimally two – to the blend; and sometimes, in reverse, from the blend back to one or more of the inputs. As Rohrer (2007) observes, Fauconnier and Turner argue against the unidirectionality of metaphor mappings. In some cases, the process of blending may occasion re-examination of an input initially activated for purposes of rendering the target space more intelligible – i.e., a metaphorical 'source' – contrary to the belief expressed in e.g. Fernandez-Duque & Johnson (1999: 85) that 'we understand aspects of the target domain via the source domain structures and not the reverse'.

[24] 'This surgeon is a *butcher*!' is considered metaphorical under most circumstances, but not 'this surgeon is a *doctor*!' What is the reason for that? How can one tell a metaphoric predicate from a non-metaphorical one?

The widening of scope, enabling CIT to address bidirectional semantic effects in metaphor and beyond, seems advantageous. However, an inauspicious consequence to a multiple-input model with random numbering as the only designation of inputs is the absence of predicate structure: something *is* something else, metaphorically speaking.[25]

To some degree, the relations between conceptual and linguistic metaphor and between domains and spaces remain unclear in cognitive studies of metaphor.[26] Future research might help elucidate these and a number of other interesting issues, some of which I address in the following sections.

In what sense is language representational? The question has an evident philosophical dimension. The answer is of consequence to the methodologies chosen – be they e.g. computational, neuroscientific, or semantic introspection – to address hypotheses involving metaphor as well as mental spaces. The last fifteen years have witnessed a growing gap in the cognitive humanities – not least in linguistics – between representationalist theories and theories that try to avoid the term 'representation' (see e.g. Johnson & Lakoff 2002). As Zlatev writes (2008: 144):

> A unifying view of the basis of social cognition has been lacking…. When, for example, Gallese, Keysers and Rizzolati write 'when only the cortical centers, decoupled from their peripheral effects, are active, the observed actions or emotions are "simulated" and thereby understood' (Gallese *et al*. 2004: 400), this is based on the assumption that neuron firing in itself possesses 'representational content' (Gallese 2005, Gallese & Lakoff 2005) which is doubtful: it is the experimenters who attribute this 'content' on the basis of their observation of the temporal co-occurrence, i.e. a form of 'indexicality' (Sonesson 2007) between events in the world and neural patterns, not the animal, and not the (human) subject. The fact that mirror neurons fire during either observations/sounds on the one hand and executions of actions on the other, does not make them more representational than, say, neurons in the visual cortex responding [to] the particular aspects of the observed scene.

Metaphor theories like CIT are caught in a bind: if the theory identifies with the anti-representational position, where does that leave semantic analysis of the more-than-cool variety (think Lakoff & Turner 1989), and how is the mental-space model of conceptual integration interpreted in a monist perspective? Much of the ambiguity concerning mental spaces might be due to an unresolved stance toward representations. This leads into a related topic: namely, the blending/binding question.

What is 'mental binding'? In CIT, *binding* is synonymous with *blending*: *aka* 'conceptual integration' or 'conceptual blending'. Turner & Fauconnier (2003 [1998]: 133) propose a hybrid,

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[25] Brandt (2013) offers an example of how bidirectional semantic effects can be handled in an analytic framework with asymmetric predicate structure. See especially the comments in Section 3.1.1.3 on the Menendez Brothers Virus joke presented in (Coulson 1996, 2001).

[26] As Tendahl and Gibbs (2008: 1841) note, it remains an open question how best to model online metaphor interpretation in cases where entrenched mappings exist between the topic and vehicle domains; 'it is not clear from cognitive linguistic studies or the extant psychological experiments whether people merely access the conceptual metaphor [e.g. LOVE RELATIONSHIPS ARE JOURNEYS] as part of their comprehension of an expression [e.g. "My marriage has hit the rocks"] or whether people must first access the conceptual metaphor and use that information to infer the intended meaning of this expression'. Of relevance to CIT is the question: If the schematic source domain translates into a source space, in blending analyses of linguistic metaphors derived from orientational metaphors (e.g., MORE IS UP), what would be the content of a generic space, given that the source space is already schematically abstract?

'mental binding': 'conceptual integration – also known as "blending" or "mental binding" – is a basic mental operation whose uniform structural and dynamic properties apply over many areas of thought and action, including metaphor and metonymy'.

A common way to describe the particular neural processes involved in perceptual integration is via a binding schema: *cf*. the notion of *perceptual binding*. Integration at the perceptual level of consciousness involves contours, chromatic qualities, and other primitives that are 'bound' to each other in the process and sent off as integrated wholes, so that when one perceives an entity, one perceives all the properties at once. Fauconnier and Turner's suggestion that this final, integrated result be called a *conceptual blend*[27] gives rise to a methodological question: if the neural binding involved in e.g. construction of a display of visible objects is inaccessible to consciousness – as is manifestly the case (no amount of concentration will allow one to experience one's own brain) – how can the cognitive semanticist identify it and diagram the process? One finds in cognitive linguistics descriptions of grammatical structures and linguistic meaning on the one hand and, on the other, physical and chemical events to which the analyst has no introspective access but must observe indirectly, by use of technological probes, and interpret as indicative of conceptual activity.

From a representationalist standpoint, linguistic meaning lends itself to two kinds of description: what goes on in the brain, and what goes on in the mind. Imaginative enactment, or 'mental simulation', is performed both neurally and experientially, calling for two distinct descriptions. By contrast, the anti-representationalist view defended in the neural theory of language posits that imaginative enactment is only performed neurally: what goes on in the mind just *is* what goes on in the brain.

5. RELEVANCE AND THE EMERGENCE PROBLEM

The critique in this section concerns the issue of *relevance* – not only as it relates to the class-inclusion view of metaphor and to relevance-theoretic notions of it, but other accounts as well, including CMT and CIT. As I aim to demonstrate, the problem identified is of general concern for all theories that neglect *communicative intention* as a factor in meaning construction.

The concept of relevance has sparked off a whole theory under its name (Sperber & Wilson 1986); it is the motivation for one of the optimality constraints in CIT: The Relevance Principle (Fauconnier

[27] 'The perception of a single entity, like a cup, is an imaginative neurobiological feat still very poorly understood by neurobiologists. That perception, which is available to consciousness, is the *effect* of complicated interaction between the brain and its environment. But we integrate that effect with its causes to create emergent meaning: the existence of a *cause*, namely, the cup, that directly presents its *effect*: its unity, its color, its shape, its weight, and so on. As a consequence, the effect is now in its cause: the color, the shape, and so on are now intrinsically, primitively, and objectively in "the cup." In perception, at the level of consciousness, it is usually only the blend of cause and effect that we can apprehend. We cannot fail to perform this blend and we cannot in consciousness see beyond it. Consequently, this blend seems to us to be the most bedrock reality….' (Fauconnier & Turner 1999: 3; see also Fauconnier & Turner 2002: 56, 78, 82, 90, 105, 108, 118, 210, 267, 292, 389).

1997: 65-66, 137-138). The historical division of semantics and pragmatics into separate disciplines is challenged by the cognitive-linguistic perspective, in opposition to the generative tradition in linguistics and the orientation in philosophy of language toward propositional sentences. Heralded by the novel, usage-oriented view of language appearing in the '60s (Austin 1962, Benveniste 1966, Searle 1969) – which demonstrated the role of sentences as *utterances* – theories like mental space theory and CIT represent a conceptual shift away from preceding paradigms, disputing the old idea that sentences are bearers of meaning independently of their function in human cognition:

> Sentences bring together, in one linguistically homogenous form, heterogeneous and incomplete information as to the cognitive constructions to be performed within a context for the purpose of constructing meaning. Meaning ensues when such operations are performed, but is not itself directly assignable to sentences (Fauconnier 1994: xx).

The idea of 'constructing' meaning is a modern – or rather *post*modern – one, materializing out of the new focus on the human subject as an indispensable factor shaping language and thought. Language is a conceptual means and not a symbolic manifestation of mind-independent states of affairs. In the first book introducing philosophers and linguists to the concept of blending, Fauconnier calls attention to the need for theoretical adjustment, proclaiming (1997: 5) that:

> [A] shortcoming of modern work, found in this case both in linguistics and in philosophy, is the sharp emphasis on separating components (e.g., syntactic, semantic, pragmatic) and attempting to study the grammatical or meaning structure of expressions independently of their use in reasoning and communication.

Sentences are no longer to be seen as propositions defined by truth conditions or as surface-structure/deep-structure pairings independent of pragmatic circumstances but as *expressions*: that is, as components of *discourse*. Fauconnier writes (1997: 163-164, *emphasis added*):

> The participants in the conversation are prompted grammatically to construct a blend, to find *contextually relevant features that produce inferences*, and to export such inferences via the connectors. The rich meaning that will ensue is not inherently contained in the grammatical structures. What the grammar does is specify a range of constructions of blends from which to choose and on which to elaborate. This is why language functions so differently from codes, logical truth-conditional systems, and the like. It never does more than set a very schematic stage for the meaning that is going on to be built and negotiated locally in usage.

In this philosophical perspective, sentences require a disambiguating pragmatic context: 'when a sentence is examined in isolation, and its interpretations are studied, it is necessary to construct implicitly a discourse in which to interpret it' (Fauconnier 1997: 55).

Of course, this should be true of metaphorical expressions as well; and yet a theoretical ambivalence prevails in metaphor theory – including CIT – regarding the situatedness of language. In mental-space terms, the *discourse base space* contains the referents of the sentence rather than 'the

situation of address' (Benveniste 1971: 218)[28]: the speech event, its participants, and its immediate circumstances.

When mental spaces are 'blended', according to CIT, structure from certain inputs is favoured over other structural elements, and the input spaces themselves contain *partial* representations: locally constructed wholes, not entire experiential domains. However, no technical explanation is offered why the favoured structure is favoured or why *those* partial representations were selected.

The structural configuration of metaphorical integrations is flexible because it depends on context. Turner writes (1991: 107; *emphasis added*): 'in general, there is no fixed structure of the target input space that the source input space must match, because the target input space has different structure *under different recruitments to it'*. Turner and Fauconnier seem in perfect agreement that the differing recruitments (*cf*. CIT's notion of *partial projection*) are motivated by what is deemed relevant in context; yet these pragmatic motivations are absent in the blending model of meaning construction.

Seeking to incorporate aspects of relevance into the diagrammatic blending model, Brandt and Brandt (2005) present a revision of the network's architecture that includes the grounding of meaning in communicative acts – borrowing ideas from relevance theory, speech act theory, cognitive grammar, and semiotics. Inputs are defined as the expression and content aspects of a sign, and the blend as a Virtual space – setting blended spaces (e.g., metaphorical blends) apart from situations without virtual identification[29] as when breakfast and lunch combine in the word 'brunch'. On this account, space building is grounded in the discourse base space[30] where the expressive acts occur. This, in turn, makes it possible to distinguish different aspects of semantic-pragmatic relevance. Indeed, the model delineates three aspects: situational, argumentational, and illocutional relevance.

The category 'shared structure between the inputs' is conceived as context sensitive – as categories generally are in CL. The structure that inputs have in common is specified by what is situationally relevant – in contrast to the idea in CIT that shared structure exists as a list of entities and relations – independent of any motivation in the conceptualizer to evoke them as similarities within a 'generic' space. The blended space contains elaborate figural images; the generic space – one of the stock spaces in a standard mental space blend – contains abstract, skeletal structure (Turner & Fauconnier 1995; Fauconnier & Turner 1996, 2002). The generic space – summarized by Gibbs (2000:

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[28] Langacker's 'ground': (2002: 7-8, 1999: 79).

[29] The blend is momentarily treated *as if it were real* and yields real inferences even though it is not vested with belief.

[30] See also (Coulson & Oakley 2005) for their employment of a 'grounding box' in their mental-space analysis of figurative meanings. The phenomenon is characterized as a box because, in the authors' analysis, it is not thought of as a mental space but as a *list*: i.e., the box 'contains the analyst's list of important contextual assumptions…' (Coulson & Oakley 2005: 1517). Brandt (2010, 2013) examines the base space, defined as the space of *enunciation* (see especially Chapter One and the sections 'Spaces and domains' and 'The semiotic base space' in Chapter Three).

349) as 'some additive space of what two or more domains have in common' – traces back to Lakoff and Turner's (1989) concept GENERIC IS SPECIFIC[31], developed further in (Turner 1991, 1996).

Turner's (1996: 87) argument for the conceptual existence of a generic space is that one can reach a generic interpretation without projecting it onto a specific target. He offers as a key example proverbs, which he describes in terms of generic-level information projected to a generic space whose abstract story may then be applied to unlimited target spaces. Possible contents of the generic space – in essence, the fundamental properties instrumental to the structuring of human experience – are (Turner 1991: 161):

> ...Basic ontological categories (such as entity, state, event, action, and situation), aspects of beings (such as attributes and behavior), event-shape (such as instantaneous or extended; single or repeated; completed or open-ended; preserving, creating, or destroying entities; cyclic or without fixed stages that end where they begin), causal relations (such as enabling, resulting in, bringing about, creating, and destroying), image-schemas (such as bounded regions, paths, forces, and links), and modalities (such as ability, necessity, possibility, and obligation).

Generic structures are constituted by mappings that establish counterpart connections between input spaces to guide the blending. The concept of mappings appears already in (Lakoff & Johnson 1980) and is a central component in mental space theory. A mapping is 'a correspondence between two sets [read: mental spaces] that assigns to each element in the first a counterpart in the second' (Fauconnier 1997: 1, Footnote 1).

Similarities in e.g. image-schematic structure make mapping possible, aligning comparable entities and relations in the inputs. The concept of counterparts presupposes structural comparability, on the basis of which elements in the source and target inputs may be fused or contrasted in a blend. Remaining unmatched structure in either space needs only be compatible, so as not to cause unmotivated conflict. Some version of CMT's Invariance Principle – asserting that mappings preserve the image-schematic structure of the source domain consistent with the inherent structure of the target domain – may still apply, adjusted to mental spaces instead of domains of experience, in the form of constraints on the projection of structure to the blend from the inputs.[32] '[The invariance principle] does not require that the image schema projected from the source already exist in the target before the

[31] Supposedly this is a conceptual metaphor even though neither source nor target constitute domains.

[32] Interpreting the principle so that is it consistent with available data requires specification of what is entailed. As Coulson writes (2001: 171-172) – based on insights arrived at, in part, from analysis of the *digging-your-own-grave* metaphor – 'these examples ["he's digging his own grave", "it's not too late to exhume ourselves from the shallow grave we've dug for ourselves" (statement about the plight of the American educational system)] show that the inferences suggested by metaphoric utterances need not result from projections based on shared relational structure. In this respect, the source domain in a metaphor is less important than previously thought [*cf*. the Invariance Principle], as causal structure in the source can be quite irrelevant for the resultant construal of the target domain'. Coulson and Oakley (2003) argue that, in some instances, the topology principle – one of the optimality principles in CIT (a parallel to the invariance hypothesis in exerting pressure to preserve relational structure: p. 59) – can compete with other optimality constraints, such that maximal preservation of relational structure may be 'traded off' in favour of other relevant concerns (p. 61).

projection, but instead that the result of the projection not include a contradiction of image schemas' (Turner 1991: 30).

It is worth noting a conflict in CMT not inherited by CIT, in part because CIT does not aim at explaining the origin of abstract domains. In CIT as in CMT, one does not necessarily have counterparts for every entity or relation in another space; it also cannot be the case that the target space has *no* structure at all. Since (Lakoff & Johnson 1980), there has been an unspoken conflict in CMT between recognition of structural attunement as a factor in explaining constraints on the compatibility of source/target constellations, and a desire to portray abstract domains as largely or entirely structured by more concrete domains via metaphorical projection such that the physical domain of sensorimotor action and perception can be claimed ultimately to ground the various other domains. In CMT, projections are thought to occur between domains that are structurally compatible: a notion supported, in part, by the Invariance Principle); but, contrary to this, CMT also claims that, in some cases, the target domain can be inherently unstructured: i.e., the target subject matter need have no structure of its own. The longevity of the idea of unstructured target domains is evident, given its appearance as late as (Tendahl 2009:156), which refers to target domains with 'no (or only little skeletal) structure'.[33]

Whether instantiating entrenched mappings between domains or not, in CIT the blends of mental spaces rely on structural compatibility as a factor motivating e.g. metaphorical mappings. Structural compatibility explains why some mappings are felt to 'fit' while others would never be considered. This is true of domains as well as spaces. The question is whether similarities abstracted from input spaces are represented as contained within a generic space.

Though it may be analytically possible to construct an exhaustive list for every blend, it seems implausible that such a list space is evoked in the mind of the conceptualizer in the act of constructing meaning. The presence of an extra space does not help explain the process of constructing the meaning of a blend – which is probably why it is generally absent from verbal descriptions of how particular meanings are derived – in some cases, even from the diagrams themselves.

Sweetser writes (2006: 33; *emphasis removed*) : '…mappings between input spaces are normally structured by a generic space …. However, it is unclear, either in Sweetser or elsewhere in the literature, what constitutes normal conditions: when are mappings presumed to be structured by a generic space and when not?

One might reasonably expect some sort of phenomenological motivation for positing the existence of this kind of representation. Without it, the space gains the appearance of an unnecessary appendage, of no obvious relevance to understanding the semantics in question. This is particularly

[33] The questionable reality of domains without internal structure aside, one argument against viewing certain metaphors as transferring structure to a target with little or no structure is that, in primary metaphors, it is the *source* domain that has 'skeletal' structure. Moreover, one would expect boundless variation in the metaphorical coupling of domains, if – as is claimed – one domain can be inherently unstructured. This is not what one sees: there *are* constraints on which domains can map onto which other domains. To take an example from Lakoff (1993: 219), death 'is not metaphorized in terms of teaching, or filling the bathtub, or sitting on the sofa'.

notable, I think, in the case of so-called 'simplex blends', composed of especially meager spaces and claimed to account for construction of the meaning of sentences like 'Paul is the father of Sally' (Fauconnier & Turner 2002).[34] Generic space often contains roles in blending analyses; but, in the case of simplex blends, role and filler are contained in Input One and Input Two respectively.[35] In the analysis of Paul (filler) as a father (role), one ends up with the category *man* (the gender) in the generic space – which does not add to understanding the semantics in question and, in any case, seems somewhat contrived.[36] In another simplex-blend example – 'this is the top of the building' – 'this' and 'the top' exist in a focus input. They are said to map onto 'a whole vertically oriented thing' and 'a vertical extremity' in a whole-with-parts frame input. This may sound rather odd: that the building needs a whole-with-parts mapping to be conceived as a whole with parts; but what is striking is the absence of any mention of generic space. It is hard to see what the contents would be, other than a 'whole' or 'vertical thing': i.e., other than a reiteration of the 'vertically oriented thing' input.

To get to the heart of the matter concerning relevance, one must attend to what Vega Moreno (2007) has dubbed 'the emergence problem'. The crux of the disagreement between various theories of metaphor is best illustrated by the controversy over the infamous butcher-surgeon metaphor. It presents certain challenges to metaphor theories – not least to CMT – since it is not conceptually motivated by experiential convergence or permanent cross-mapping. The metaphorical expression 'this surgeon is a butcher' activates the experiential domains of butchery and surgery: two domains not systematically associated in advance. The utterance linking the 'butchery' source domain to the 'surgery' target domain is not a linguistic instantiation of an entrenched conceptual metaphor: e.g., *MEDICAL PRACTICE IS FOOD PROCESSING or *SURGEONS ARE BUTCHERS. Neither does it bank on a concrete-to-abstract directionality of conceptualization: source and target could

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[34] The *XYZ* form – '*X* is the *Y* of *Z*' – was originally of semantic interest because of the hidden *W* in *XYZ* metaphors – '*X* is to *Z* as *Y* is to *W*'. Mental spaces were shown to help account for the figurative meanings thus analyzed (see e.g. Turner 1996). However, by (Fauconnier & Turner 2002; especially Chapter Eight), interest has shifted from the underlying semantics of *XYZ* metaphors ('vanity is the quicksand of reason' [Sand], 'the Child is father of the Man' [Wordsworth]) to their syntactic form; so the authors include in their discussion such literal statements as 'Paul is the father of Sally' or 'this is the top of the building'. *XYZ* blends have come to be defined, not semantically, but in terms of the *syntactic form* of linguistic units; the construction itself prompts a blend. '…The syntax and mapping scheme of "The Child is father of the Man" are the same as the syntax and the mapping scheme of "Paul is the father of Sally"' (Fauconnier & Turner 2002: 142).

[35] Attributes and the entities to which the attributes apply are thus thought to be represented separately.

[36] In addition to 'local' generic spaces with structure abstracted from inputs, Fauconnier and Turner claim the existence in multiple-integration networks of an unspecified number of 'global' generic spaces as abstractions of one of more spaces in the network. 'A blended space is a mental space, and we can always make a more abstract version of a mental space'. Using 'this surgeon is a butcher' as example, the authors suggest a host of abstractions fitting the blend. 'One very abstract generic space fitting this blend has only a person who acts. A less abstract one has an actor and something acted upon. A still less abstract space has an actor and the physical object (living or not) acted upon. A generic space derived in this manner might coincide with the local generic space over the inputs, or be more abstract, or be more specific. Or it might contain abstract structure corresponding to emergent structure in the blend, in which case it will not fit the inputs' (Fauconnier & Turner 297-298). The authors do not state under what circumstances, how, or for what reason these spaces exist; perhaps the phrase 'derived in this manner' indicates that stating their conceivability is a method of derivation.

conceivably be reversed, given the right context.[37] On every account, the metaphor is taken to be a criticism of the surgeon; in most analyses (e.g. Grady *et al*. 1999, Fauconnier & Turner 2002), it is said to predicate incompetence. Glucksberg (1998: 42) writes of the surgeon-as-butcher that he is 'a member of the category of people who botch jobs in reprehensible and often appalling ways'; Brandt and Brandt (2005) write that he is reproached for practicing his profession with an attitude of reckless indifference; he is hence said to act in an ethically indefensible manner. Vega Moreno (2007) mentions incompetence, malice, negligence, and carelessness as possible implicatures. No account of the meaning of the butcher-surgeon metaphor fails to interpret it as a criticism, illustrating that the metaphorical relation between source and target cannot be one of mere projection.[38] In CMT, meaning derives from the source domain; but nothing inherent in the experiential domain of butchers warrants negative evaluation. How does the critical meaning emerge?

Glucksberg (1998) attempts, unconvincingly, to define 'butcher' as having an inherently negative encyclopedic meaning; the alleged meaning regrettably presupposes the existence of butcher metaphors. Vega Moreno (2007) uses this to criticize Glucksberg's attribution model of metaphor.

Charting historical theory development leading up to the present, Vega Moreno describes how much contemporary research on metaphor has moved away from 'feature matching' models of metaphor – the idea that metaphor comprehension involves matching properties between topic and vehicle – toward 'attribution' models, by which metaphor interpretation is a matter of attributing a subset of properties of the metaphor vehicle to the metaphor topic. 'A very serious problem for both

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[37] Sperber and Wilson (2008) mention the possibility of reversal. They offer the example 'this butcher is a surgeon'. Note, however, that Sperber and Wilson do not analyze the sentence as an utterance. They hypothesize an apparently context-free, static meaning as a symmetrically reversed version of their – similarly isolated and context-free – example 'this surgeon is a butcher'. 'The interpretation of ['this butcher is a surgeon'] is equivalent of the one for ['this surgeon is a butcher'], and involves the construction of an ad hoc concept SURGEON*, denoting people who cut flesh with extreme care. A butcher who is also a SURGEON* is outstandingly competent and trustworthy. The predicates BUTCHER* and SURGEON*, along with the implication of incompetence for a surgeon who is a BUTCHER* and of competence for a butcher who is a SURGEON*, emerge unproblematically in the course of an inferential comprehension process guided by the search for relevance' (Sperber & Wilson 2008: 97-98). I am skeptical of this analysis, first and foremost because the authors overlook the significance of contextual grounding and seemingly take for granted that the metaphor has a fixed meaning – despite the denunciation, in relevance theory, of fixed metaphorical meanings. If the butcher is a surgeon, the butcher is said to be competent. Equally likely is the possibility that the metaphorical surgeon predicate serves as a complaint that the butcher in question is not efficient enough. Separating meat from bones 'ain't surgery': it needs to be done with accuracy *and speed*. A butcher 'being' a surgeon – doing his job as a surgeon would – would not, in this scenario, be doing his job competently.

[38] Grady and colleagues (1999) make just this point: simple projection cannot account for emergent meaning. It is unclear how CMT should analyze the butcher-surgeon metaphor. Would its proponents propose that the emergent meaning is predictable from the source category? Lakoff (2008: 32) attempts a solution involving the formula A PERSON WHO PERFORMS ACTIONS WITH CERTAIN CHARACTERISTICS IS A MEMBER OF A PROFESSION KNOWN FOR THOSE CHARACTERISTICS. Lakoff characterizes this as a formula for conceptual metaphor, but it reads more like a formula for hyperbole: e.g., one may jokingly refer to someone funny as a 'comedian'. In any event, it is hard to see how A PERSON WHO PERFORMS ACTIONS WITH CERTAIN CHARACTERISTICS could conceivably become a useful domain in human experience. Tendahl and Gibbs (2008: 1830) express a similar skepticism, calling for further linguistic analyses 'to clarify the exact conceptual metaphor at work'.

matching models and attribution models is that sometimes the set of properties which are attributed to the topic are not stored as part of our representation of the vehicle…' (Vega Moreno 2007: 75). To illustrate, Vega Moreno offers two metaphorical examples, the first being a butcher-surgeon metaphor:

> (1) Doctor: I am afraid the surgeon who performed a caesarean on your wife perforated both ovaries. I had no choice but to remove them. Husband: I want that surgeon out of the hospital. That surgeon is a butcher![39]
> (2) Jane: I know I have to speak to my boss but I am afraid of him. He is such a bulldozer!
>
> The speaker in [1] may be expressing the thought(s) that his wife's surgeon is highly incompetent, dangerous, careless, etc. The speaker in [2] may be expressing the thought(s) that her boss is stubborn, difficult to deal with, that he is not respectful to her, that he undermines her needs, her thoughts, etc. The problem raised by these examples is that our knowledge of butchers does not include the assumption that butchers are negligent and careless and our knowledge of bulldozers does not include the assumption that they are disrespectful or stubborn. Since the set of intended properties are not stored as part of our representation of the vehicle, they can be neither matched with the properties of the topic nor attributed to it. Both matching and attribution models therefore fail to explain how these properties are derived (Vega Moreno 2007: 76)

On a semiotic account, the construal of the butcher space is determined by relevant aspects of the target: the patient's caesarean supposedly motivates the elaboration – 'composition' and 'completion' in CIT terms – of the butcher and surgeon spaces and hence the negative evaluation of the surgeon. Other explanations seek to derive the meaning from the concepts evoked by the sentence independently of any speech event. Glucksberg and Keysar (1990) argue that metaphors are understood as class-inclusion statements. They describe metaphorical predication as a matter of including the target in a superordinate category of which the source is a prototypical example[40]; alternatively, the source entity has a metaphorical meaning fixed in the lexicon, which is then ascribed to the target. 'The categorical statement… *My surgeon was a butcher* assigns my surgeon to the class of people who are incompetent and who grossly botch their job' (Glucksberg & Keysar 1990: 9). On this view, it would appear possible to predict the meaning of the form 'T is a butcher': T is someone 'grossly incompetent in tasks that require finesse, skill and expertise' because that is a meaning of 'butcher', according to the dictionary entry. The reference to a superordinate category or 'class' seemingly circumvents the need for conceptual integration in a third mental space; in this respect, the

[39] 'Glucksberg and colleagues often illustrate their ideas with the example "my surgeon is a butcher". They argue that in understanding this metaphor, the hearer aligns vehicle properties and topic dimensions, thus constructing an attributive category "people who are incompetent and who grossly botch their jobs", which the vehicle typifies and which can assign a negative value to the dimension of "skill" provided by the topic…' (Vega Moreno 2007: 78).

[40] Vega Moreno (2007: 74) points out difficulties with this. First, the source category – e.g., 'butchers' – can potentially be members, even typical members, of an indefinite number of *ad hoc* categories. 'Second, according to Barsalou's experiments, prototypicality is an unstable notion which varies across contexts, points of view, individuals, etc. with the typicality of a given member arising as a byproduct of constructing an ad hoc category rather than as a prerequisite to the construction of that category. Third, even if we take prototypicality to be a stable notion, and assume that [the] metaphor vehicle can exemplify only a limited number of ad hoc categories…, none of these categories may be the one intended by the speaker on a certain occasion …'.

theory is akin to CMT. The predicate is transferred from source to target, thereby including the target in the attributive category.

However, even if some variability is allowed – seeing the metaphorical predication as the result of category interaction between source and target, taking into account the possibility of variant targets – explanatory difficulties arise. If one assumes, *per* Glucksberg (2001), that attribution of properties is a function of possible superordinate categories exemplified by the source category and conceptual dimensions offered by the target, one concludes that the category of incompetent workers – of which 'butcher' is claimed to be an exemplar – fits the dimension 'skill' in the target. The dimension 'skill' is thought to be inherently salient to the category 'surgeon', suggesting a view of categories as static and context independent. In a sense, Glucksberg acknowledges 'relevance constraints imposed by the topic' (Glucksberg 2001: 55); but, because he thinks of *relevance* strictly in relation to source and target as static categories, relevant constraints are similarly static and context independent. His model does not explain how a dimension is selected – a shortcoming partly due, I think, to topical concepts being imagined as categories rather than scenarios or 'partial and temporary representational structure[s] which speakers construct when thinking or talking' (Grady, Oakley & Coulson 1999: 102).

I note three other problems with the analysis. First, 'my surgeon was a butcher' can only be described as a categorical statement insofar as one ignores what the metaphor is *about*. There is no reason why the *ad hoc* superordinate category 'the set of workmen who are incompetent and grossly botch their jobs' should be constructed, if the intended inference is about a particular surgeon, as it is in the example given. The intention is hardly to categorize the surgeon as belonging to a set, so the critical question is a methodological one: why, in analyzing the metaphor, construct a category that is not warranted by any relevant circumstances pertaining to the situation where the metaphor is produced?

Second, the class-inclusion account of metaphor skirts the issue how '…is a butcher' becomes a negative predicate of the target entity *T*. The predicative meaning 'my surgeon was incompetent and grossly botched the job' is said to be the result of a logical operation, given the predetermined lexical meaning of 'butcher'. The predicate ascribed to the surgeon comes from one of the Webster dictionary entries for 'butcher': 'an unskillful or careless workman' (Glucksberg & Keysar 1990: 9). Since butchers are not generally thought of as grossly incompetent or 'unskillful or careless' – they are not prototypical instances of 'the set of workmen who are incompetent and grossly botch their jobs' – how did the lexical entry 'butcher' acquire this conventional meaning? The answer, of course, is: *from metaphor*. Vega Moreno (2007: 78) notes the circularity of argument from a relevance-theoretic point of view:

> There is an important problem inherent in this well-known example…: how can people construct the ad hoc attributive category 'people who are incompetent and who grossly botch their jobs' by selecting a subset of properties from the metaphor vehicle if the property of 'botching their jobs' is not part of our representation of butchers? Our knowledge of real butchers may include the

> assumptions that they cut and sell meat, that they use sharp knives, etc. It does not, however, include the assumptions that butchers are incompetent, negligent, careless or people who botch their jobs. If we thought butchers were generally incompetent, we would not trust them and would never buy food from them. Since these properties are not associated with the metaphor vehicle, and since the Class-Inclusion view takes the ad hoc attributive category to be formed by selecting properties from the vehicle, it is not clear how this category is ever formed. Lacking adequate machinery to construct the ad hoc category the speaker intended to convey in producing the metaphor, the Class-Inclusion theory cannot account for how emergent properties are derived.

Third, what is salient about the target may vary from instance to instance; it cannot be identified by any one dimension like 'skill'. Though it may be a valid generalization that 'butcher', used metaphorically, conveys a negative meaning,[41] the attributes predicated vary and, in some instances, imply a more active agency, involving e.g. brutality or lack of compassion, than that implied in the examples discussed here.[42]

Vega Moreno argues (2007: Ch. 3)[43] that the problem causing these theoretical difficulties for various interaction theories, including CIT, is generally attributable to two things: (1) omission of any account of how the interaction between categories / domains / mental spaces is supposed to make meanings emerge and (2) exclusion of the speaker's intentionality as a factor in interpretation. She writes (2007: 75; *emphasis added*):

> …Saying that metaphor interpretation (and category construction) depends on an interaction of topic dimensions and vehicle properties cannot explain how an utterance can have an indefinite number of possible interpretations, or how the hearer chooses or constructs a hypothesis about the one intended by the speaker. Not only can a single dimension-property combination open the way to a range of possible interpretations [as in 3a and 3b below], in many cases a good number of properties of the vehicle can be used to characterise a good number of topic dimensions. *Since*

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[41] Notice, however, that instances of metaphor exist where the source domain of butchery contributes to a framing that is *not* laden with negative meaning: e.g., the Danish metaphor *at skære ind til benet* ('to cut to the chase', lit. 'to carve close to the bone') means to make a straightforward and precise ("clear-cut") assessment eliminating inessential material. The metaphor exploits the imagery of cutting meat off a bone with high precision so as to eliminate waste – an economically sound practice associated with skillful butchery. Thus applied to the domain of argumentation the domain of butchery serves to enhance the idea of skillful exactitude.

[42] Henry Kissinger in conversation with President Nixon (The Nixon Tapes, 25 April 1972). NIXON: The only place where you and I disagree… is with regard to the bombing. You're so goddamned concerned about civilians and I don't give a damn. I don't care. KISSINGER: I'm concerned about the civilians because I don't want the world to be mobilized against you as a butcher. (Transcript available at the the National Archives.) For further examples, see (Brandt & Brandt 2005; Brandt 2013: Ch. 3).

[43] 'A metaphor, for example a nominal metaphor of the form X is Y, may be used to convey a wide range of different meanings ["That lawyer is a shark", "John is an iron bar"], and involve the formation of a wide range of different ad hoc categories…. The question is: what determines the formation of the different ad hoc categories…? The Class-Inclusion Theory provides no answer to this question. According to this theory, aligning a metaphor topic and a metaphor vehicle should result in the emergence of a combination of topic dimensions and vehicle properties which should form the basis for the construction of the ad hoc category to which topic and vehicle belong, and so the basis for the interpretation of the utterance. If this is all there is to metaphor interpretation, aligning the same topic and vehicle should result in the emergence of the same combination of dimension and property, the construction of the same attributive category and in the derivation of the same interpretation across contexts. This is clearly not the case' (Vega Moreno 2007: 73-74). Vega Moreno does not direct her criticism solely at CIT but interactive views in general.

> *every combination offers a potential ad hoc category to which both topic and vehicle can be said to belong, how does a hearer know which one was intended?* The Class-Inclusion Theory lacks adequate interpretive tools to answer this question.

Vega Moreno gives two examples of the same dimension-property combination yielding different implicatures (3a, 3b), and two illustrating variations on vehicle (i.e., source) properties (3c, 3d):

> (3a) (Of a surgeon who has been negligent) That surgeon is a butcher.
>
> (3b) (Of a pianist who has played terribly badly) The pianist butchered the sonatas.
>
> (3c) (Of a teacher who fails most of the class) That teacher is a butcher.
>
> (3d) (On a gruesome crime scene) This man is a butcher!

She writes (2007: 73):

> I agree with the 'interactive' idea that the presence of the metaphor topic has an effect on the set of attributes or assumptions which we access from the metaphor vehicle on a given occasion (e.g. the activation of a certain concept in memory may have an effect on how we process incoming information). However, I don't agree with the assumption that by putting a certain topic and a certain vehicle in the same sentence, the right combination of dimension and attribution will emerge, by magic, providing an adequate basis for interpretation.

This leads into a discussion of the problem of emergence (2007: 76-78):

> Properties which are not part of the hearer's representation for the metaphor vehicle or the metaphor topic, but which seem to emerge in interpreting a metaphor, are often referred to in the literature as 'emergent properties' or 'emergent features'. Examples [1] and [2] show how emergent features play a crucial role in arriving at the meaning the speaker intended to communicate in uttering a metaphor. It follows from this that any adequate account of metaphor interpretation should aim to provide an explanation of how these emergent features are derived. I shall refer to this as the 'emergence problem' of metaphor interpretation…. Saying that features emerge from interaction is not explanatory: it is necessary to spell out how it is that they are derived. One should then expect the cognitive models inspired by Black's ideas [metaphor interpretation as essentially an interactive process between two concepts or domains] to provide a detailed account of the pragmatic or cognitive steps involved in the derivation of new mental structures and the emergence of new properties. Unfortunately, although a substantial amount of experimental research has been stimulated by the romantic idea of metaphor as powerful and creative, very little work has been done to explain how emergent properties are derived. In fact, experimental work which deals explicitly with the issue… has mostly been concerned with presenting evidence for the existence of emergent features rather than explanation of the cognitive processes involved in their derivation. The lack of work on accounting for the derivation of emergent properties in metaphor interpretation is surprising not only because solving the 'emergence problem' is essential for understanding how metaphors are understood but also because most modern approaches to metaphor are based on the assumption that something new is created in interpreting a metaphor. The issue of emergent properties is a thus a problem for all theories which aim to account for how hearers arrive at the interpretation intended by the speaker's use of a metaphor….

Despite the advantages of modern cognitive approaches to metaphor, 'a problem common to all these approaches is that they lack the *pragmatic inferential mechanisms* necessary to guide the comprehension process and to account for the attribution of properties and the derivation of emergent properties taking place in interpreting a metaphor' (Vega Moreno 2007: 85, *emphasis added*) – so, too, in the case of blending theory, its own advantages notwithstanding. In her efforts to pinpoint the main

challenge facing the theory, Vega Moreno critiques Grady and colleagues' (1999) analysis of the butcher-surgeon metaphor, explaining why the processes of *composition*, *completion,* and *elaboration* cannot – as Grady proposes – account for metaphor comprehension. She poses the same question motivating the inquiry in (Brandt & Brandt 2005): what determines the emergence of meaning? 'Scholars pursuing Blending Theory argue that emergent properties arise naturally from the construction of the blended space. But if a blended space is constructed by projecting information from different sources, namely input spaces and encyclopaedic information, how can anything "emerge"?' (Vega Moreno 2007: 80)[44]

Vega Moreno (2007: 80) summarizes how blending analysis take one through the vital steps of constructing a metaphorical representation of a butcher-surgeon but misses a step that would allow one to get from the metaphorical blend to the critical meaning intended by the metaphor's utterer:

> It is important to notice, however, that the blended space provides us with a certain representation which cannot be the one the speaker intended the hearer to derive. The speaker of the metaphor above, for instance, does not intend to communicate that there is a butcher operating on a patient but that there is a certain surgeon who does not do his job properly. The blended space provides information which is indeed consistent with a literal interpretation of the utterance, the interpretation that my surgeon is a real butcher! Attempting to explain how one gets from this interpretation to the intended one implies a variant of the standard serial model of metaphor interpretation [based on the assumption that derivation of metaphorical meaning relies on rejection of literal meaning] so widely criticised among psychologists. Maybe the hearer is simply supposed to take the blended space metaphorically so as to derive the set of thoughts the speaker intended to convey. If this is true then forming the blended space does not account for how metaphors are understood and just takes us into needless circularity.

Vega Moreno's critique of blending theory ultimately serves as an appeal to take seriously into account *the speaker's communicative intentions* (2007:81):

> One important problem with Blending Theory, and with many psycholinguistic approaches to metaphor, is that it does not take seriously into account the speaker's communicative intentions. I have shown earlier how a single metaphor 'John is an iron bar' or 'my lawyer is a shark' can be used to convey a number of different meanings on different occasions. In order to explain this in terms of Blending Theory, one would have to say the hearer forms a different blend [on] every occasion. It is not clear how this can be done. Since the projection from input spaces to the blended space is taken to be based on structural similarities between spaces and not in the search for the recognition of speaker's intentions, there is no apparent reason why different elements from an input space would be projected into the blended space on different occasions. In fact, even if the explanation of different interpretations were to be given in terms of different types of completions of the blend, the theory cannot explain what determines these different completions.

Given Vega Moreno's arguments, it is not surprising that her solution emphasizes discourse comprehension and derivation of the inferential meaning determined by the speaker's intentions.

[44] The CIT diagram features a surgeon space, a butcher space, and a blend of the two spaces in which the fused agent has a surgeon's goal but uses a butcher's means to achieve it. In a generic space, an abstract agent uses general means to achieve a general goal. The intended meaning of incompetence derives from a crossover between the goals and means of butchers and surgeons, respectively, creating a mismatch of using a butcher's means for the surgeon's goal of healing a patient. The analysis omits any explanation for why the agents' crossover does not have a surgeon's means and a butcher's goal, which might equally have been the case.

Perhaps more surprisingly, her proposal continues in the tradition of CIT or attribution theory in adopting Glucksberg's insertion of *ad hoc* categories into the interpretive analysis.[45] She adds an extra analytic dimension meant to close the attested gaps in CIT, in the form of an inferential process yielding the intended implications: '…an inferential process which may involve several inferential steps, and several instances of pragmatic fine-tuning, before the resulting implications may be plausibly taken to apply to [the target]' (Vega Moreno 2007: 110; see also Sperber & Wilson 2008).

The examples she analyzes are all nominal metaphors explicitly linking a target and a source: *T* IS *S*; presented with no – or minimal – discourse context. As a result, the meaning to be explained remains vague, typically represented as a short list of attributes followed by 'etc.'. In the butcher-surgeon example ('that surgeon is a butcher'), her analysis of the inferential process consists of a sixteen-step list of implications. Not necessarily processed in strict sequence, the list involves deduction from a constructed *ad hoc* category of people who make less-than-optimal incisions to surgeons in general, and from surgeons in general to 'that surgeon'. Her analysis of the mapping relations and blended imagery in (Grady *et al*. 1999) is replaced by a relevance-theoretic notion of category formation, characterized as the 'adjustment' of an initial encoded concept and a process of deductive reasoning meant to 'derive a set of implications that may help to satisfy [the hearer's] expectations of relevance' (2007: 106).

It is not entirely obvious why Vega Moreno abandons the idea of blended spaces altogether. One might suppose that, adapted to her relevance-theoretic framework, it might help explain the proposed process of conceptual adjustment.[46] Neither does she make clear exactly how the *ad hoc* concept BUTCHER* yields the intended meaning. She says only that (2007: 111): 'the inferential process may

[45] Each category is represented by a lexeme marked with an asterisk and written in capital letters.

[46] See (Tendahl 2009) for a proposal along these lines. Tendahl acknowledges the 'need and possibility of achieving a broader and more realistic theory of metaphor' (2009: 276) by bringing together research from different disciplines with overlapping research goals. He presents a *hybrid theory* integrating relevance theory, CIT, and CMT. As he points out, relevance theory has yet to offer any suggestion as to how the *ad hoc* concepts it proposes are formed or how mutual adjustment of lexical content, explicatures, and implicatures occurs. Similarly, CMT offers no suggestions about 'the conditions determining which elements from a source domain are mapped to a target domain' (2009: 287); generally speaking, it has paid insufficient attention to pragmatic aspects of metaphor use as well as the creation and interpretation of metaphors that do not instantiate any underlying conceptual metaphor. Tendahl sees advantages to integrating these three theoretical frameworks not least for the interest all of them take in the online processing of metaphor. He finds the network model well-suited to capture 'the dynamics of the ways in which different kinds of linguistic and contextual information interact' (2009: 286). Though I agree with the overall sentiment, problems persist in the merger – including, I think, atomistic use of mental spaces (see Section 5.5, where each lexical concept acquires its own mental space). Other problems include a missing *semantic* dimension to the analysis of relevance in relation to interpretation of meaning, and an enduring belief in the explanatory power of *ad hoc* concepts and metaphorical lexical concepts that already have metaphorical meaning when applied in analysis. Among other examples, Tendahl analyses parts of a speech by Tony Blair employing strikingly metaphorical language: '…we have launched an unprecedented crusade to raise [educational] standards" (2009: 249). He rightly notes the impression of enhanced force emerging from the blend of political action and an 'unprecedented crusade' but does not explain how that impression emerges. Furthermore, the derivative lexical concept CRUSADE2 (CRUSADE1 being a literal crusade) – including 'assumptions about campaigns, political/religious/social change, etc.' (2009: 256) – presupposes the very metaphoricity it seeks to explain.

involve several steps, which take the constructed ad hoc concept further and further away from the encoded concept ….' Metaphorically speaking, the concept is taken 'further and further away' by 'following a path of least effort'. Why does this happen?... simply to 'yield appropriate implications'. One reads that the 'adjustment' inferentially warrants implications that help satisfy the hearer's expectations of relevance; but no semantic analysis ensues. Her repeated references to adjustment begin to appear formulaic and still do not explain *how* these implications are derived.[47]

6. THE RELEVANCE OF METAPHOR

In Vega Moreno's relevance-theoretic account of metaphor, *ad hoc* concepts may highlight similarities between concepts; or, as in the case of the butchering surgeon or the bulldozing boss ('my boss is a bulldozer'), they may exclude all members of the original, non-metaphorical category. Thus, the 'butcher' category can represent brutality and the 'bulldozer' category insensitivity, despite there being no insensitive bulldozers and no butchers that are unethical or incompetent by virtue of being butchers. '…The resulting ad hoc category may exclude certain members of the denotation of the encoded concept. In other cases, it may exclude all the members of the denotation of the encoded concept, so that the literal referent of the metaphor vehicle is not only not a prototypical member of the resulting ad hoc category, but not a member at all…' (Vega Moreno 2007: 126-127). The *ad hoc* category BULLDOZER*, said to develop unconsciously in interpreting the metaphor 'my boss is a bulldozer', denotes neither bulldozers nor bulldozer attributes nor any inanimate entity, but people who are 'disrespectful, obstinate, undermine other people's feelings and thoughts, etc.' (2007: 97)

That the entities the encoded concept normally denotes fall outside the denotation of the new, *ad hoc* concept is not regarded as a problem. 'Because the encoded concept is merely a starting point for inference, there is no reason why it should not be adjusted to a point where the entities it is normally used to denote fall outside the denotation of the new ad hoc concept that results' 2007: 105). The *ad hoc* category is to be thought of as a class or set to which the target belongs; the boss in question thus belongs to 'a set of people who are insensitive to the feelings of others, ignore their suggestions and objections, are fixated on their own goals at the expense of others, are a danger to those who oppose them, etc.' (2007: 112) It remains unclear on what grounds Vega Moreno deems it plausible that the conceptualizer must conceive of a set including the boss as only one among many members, never mind how the conceptualizer derives this alleged meaning. That the conceptualizer follows a 'path of least effort' (*cf*. Sperber & Wilson 2008) seems to me an insufficient answer.

[47] In the course of just a few pages (2007: 106-108), she makes up to seven references to adjustment warranting the derivation of a set of implicatures to help satisfy the hearer's expectation of relevance – leaving the reader increasingly curious as to the cognitive process by which this is achieved. As Tendahl notes (2009: 153): 'according to relevance theory, we should assume that for *butcher* we create an ad hoc concept *butcher** the denotation of which should encompass surgeons. However, we still do not know how we can extend the denotation of "butcher" in a way that surgeons are captured and the notion of incompetence is included…. Often the gap between a lexical concept and an ad-hoc concept cannot be accounted for theory-internally in relevance theory.'

Vega Morena intends that a process of adjustment accounts for the transition: '…the concept conveyed by the word "butcher" [and similarly by the word "bulldozer"] is continuously adjusted in order to warrant the derivation of these implicatures' (2007: 104-105). It remains a mystery how this adjusted category comes into being. The process happens behind closed curtains, so to speak; the hearer may only come to know the novel category after the fact: i.e., after having arrived at the result. '…It is important to bear in mind, that the hearer of the utterance does not find out what the actual denotation of the concept BUTCHER* constructed during the interpretation process would be until he arrives at an interpretation… which satisfies his expectations of relevance' (2007: 103).

Since Vega Moreno suggests no retrospective reconstruction to shed light on the conceptual process entailed by the adjustment, the semantics of the interpretation process, leading to satisfied expectations of relevance, remains obscure. The interjection of the adjustment process – constrained by the general regulatory mechanisms of relevance[48] – is meant to ease dissatisfaction with the near-magical emergence of metaphorical meaning attributed to CIT and blending theory, among other interaction theories[49]; but one is left with the unanswered question, as Tendahl and Gibbs (2008: 1839) point out, 'why a physical attribute can acquire a psychological sense'.

Vega Moreno aspires to an account of metaphor that does not require any alignment of or mapping between domains. Nevertheless, elements and attributes are aligned and compared. In the case of the butcher-surgeon metaphor, the necessary 'pragmatic fine-tuning' is hypothesized to involve inferential steps (f) and (g): (f) 'a butcher cuts dead meat in a way that falls far short of the high levels of precision, delicacy, foresight and planning to avoid risk required in a competent surgeon', (g) 'the surgeon is a BUTCHER* (where BUTCHER* denotes people who make incisions in a way that falls far short of the levels of precision, delicacy, foresight and planning to avoid risk required in a competent surgeon)' (Vega Moreno 2007: 102) How are these inferential steps arrived at? How does the butcher come to be evaluated as a surgeon (his method "falls short")?

The style of analysis precludes justification. No procedure is indicated for countering or confirming particular analyses; one can only try to ascertain whether they are internally coherent. Methodologically speaking, the empirical dimension is replaced by a logical-inferential one. From a standpoint of cognitive processing and communicative relevancethe theory lacks an epistemic – and

[48] Compare Sperber and Wilson's (2008) deflationary claim that metaphor is 'nothing but looseness', arrived at 'in exactly the same way as literal, loose and hyperbolic interpretations: there is no mechanism specific to metaphors, and no interesting generalisation that applies only to them' (2008: 84). 'It is just that, on the whole, the closer one gets to the metaphor end of the literal/loose/metaphorical continuum, the greater the freedom of interpretation left to hearers or readers, and the more likely it is that relevance will be achieved through a wide array of weak implicatures, i.e. through poetic effects. So when you compare metaphors to other uses of words, you find a bit more of this and a bit less of that, but nothing deserving of a special theory, let alone a grand one' (2008: 103) The authors wish to extend their theory to account for poetic effects not just in speech but in literary texts as well. One question that comes to mind, somewhat – though not entirely – off topic, is how a theory hinging on the discourse interaction between speaker and hearer in online situations can deal with literary discourse, where meaning is created outside this kind of situationally grounded interaction.

[49] Cf. Vega Moreno 2007: 73.

indeed *pragmatic* – rationale for the proposed *ad hoc* categories to come into existence: what, in the process of meaning construction, prompts conceptualizers to construct these concepts? To take an example, the 'category' account of the butcher-surgeon metaphor (Example 1: 'Husband: I want that surgeon out of the hospital. That surgeon is a butcher!') introduces a whole group of surgeons into the inferential equation: 'surgeons who make incisions in a way that falls short of the levels of precision, delicacy, foresight and planning required may cause serious damage to someone in their care' (Vega Moreno 2007: 103). Yet the expression only makes reference to one particular surgeon; one wonders what warrants the evocation of surgeons in general. The speaker has no evident reason to relate the ovary-removing surgeon to a general class of people who botch jobs, etc. What makes such a broad category relevant for meaning construal? With no obvious semantic or pragmatic motivation, the category appears to be a purely *analytic* construct.

The *ad hoc* category BUTCHER* is similarly problematic. It 'denotes people who make incisions in a way that falls far short of the levels of precision, delicacy, foresight and planning to avoid risk required in a competent surgeon' (Vega Moreno 2007: 102) and, in yet more inclusive terms, 'the set of people who fall short of the standards of precision, delicacy and foresight required in making an incision, causing damage to humans beings in their care, and being liable for sanction as a result'. (2007: 105) 'The concept BUTCHER* as presented here [in a relevance-theoretic framework] would denote anyone (not necessary surgeons) who make cuts of this type' (2007: 103) Though inferentially useful in creating a valid deductive line of reasoning, it is hard to see why people other than butchers – i.e. all "people" who make cuts of this type – would be relevant to consider.

In the case of the metaphorical bulldozing boss, an alternative analysis might conceive of 'removing obstacles in the way' not as a feature or attribute – REMOVE OBSTACLES IN THE WAY – but as a quasi-narrative scenario unfolding in the conceptualizer's imagination. A bulldozer – the 'vehicle' of the metaphor – removes obstacles in one's way. If this is the aspect that the situationally framed referential content (the boss) brings to the forefront, then the virtually represented blend of boss-and-bulldozer does something to the way in which the scenario, with the forceful boss, is seen in the mind's eye. Mappings of quasi-narrative – temporally dynamic – structure make the relevant topic structure stand out in vivid and exaggerated form, rendering the predicate more potent and emotionally evocative. The generic presentation of a bulldozer in action provides a *force-dynamic* framing the target scenario: presumably, the relation between employer and employee. The context provides a relevant, contextually motivated *schema* for evaluating the entity or relation in focus – the target scenario now framed by the relevant force dynamics of the source imagery – perhaps, in some interpretations, a social schema for evaluating specific types of interactions involving conflicting agendas, etc. In the mental space superposing the generic presentation onto the reference – the so-called 'blend' – the target is thus framed by the narrative force dynamics of the source and powered by its figural imagery: e.g., agent entity as bulldozer-boss, patient entity as inanimate run-over 'stuff' or human road kill.

With its focus on the dynamic aspect of meaning – rather than encyclopaedic knowledge structures – this kind of phenomenological description represents a relevance-oriented alternative to accounts positing the *ad hoc* invention of superordinate categories such as the 'butcher' category of 'people who botch jobs in reprehensible and often appalling ways' (Glucksberg 1998: 42); or, in Sperber & Wilson's analysis (2008: 97), the category identified as BUTCHER* 'denoting people who treat flesh in the way that butchers do' – or, in Vega Moreno's (2007: 105) more intricate analysis, the category that 'denotes the set of people who fall short of the standards of precision, delicacy and foresight required in making an incision, causing damage to human beings in their care, and being liable for sanction as a result'.

The force-dynamic description helps explain what is cognitively gained by the use of metaphorical expressions. Furthermore, it addresses Vega Moreno's concern (2007: 136) that 'if comprehension involves an interaction or mapping between two domains, there is a risk of circularity: the properties which the topic helps select in the vehicle are the properties attributed to the topic by the vehicle'. The metaphorical blend exposes a correlation between the force-dynamic structure in the blend of 'source' and 'target' inputs, with the effect of an experienced difference in the *intensity* of force.[50] On this hypothesis, the emotional potency of metaphor is due to the experienced intensification of force in the target input when seen as the source: in the blend, the one virtually *is* the other, creating a *hyperbolic* effect. The force-dynamic intensification and the accompanying imagery supporting it explain the expressive advantages, both in communication and inner dialogue. The more strongly experienced both the force-dynamic and figural aspects of a metaphorical scenario are, the more evocative the metaphor.[51]

7. CONCLUDING DISCUSSION

Since the beginning, the nature and development of concepts has been a significant focal point in cognitive semantics, and with good reason. The distinctive characteristics of categorization and conceptualization are basic to any subject matter relating to human cognition, not least language – shown to directly depend on the inner workings of just these phenomena.[52] With mental space theory, a theory appeared that could encompass, in its scope of research data, the vast realm of human expressivity – including multimodal, diversely expressive phenomena like visual art, advertisement,

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[50] For more on the *force-dynamic aspect of metaphor*, see the discussion of the *digging-your-own-grave* metaphor in (Brandt 2013: Section 3.1.3). The proposed analysis of gravedigging expressions provides a methodological alternative to Coulson's (2001: 168-172) and Fauconnier and Turner's (2002: 131-135) 'reverse causality' account, as well as to the vision put forth in (Ruiz de Mendoza Ibáñez 1998: 273): '…a vision of blended spaces as a by-product of the activity of working memory where matched productions retrieved from production memory are executed to yield pre-established combinations of ICMs [Idealized Cognitive Models]'.

[51] (Brandt 2013: Section 3.1.2) offers an in-depth semantic analysis of the butcher-surgeon metaphor.

[52] For me, the perspective Lakoff offers in *Women, Fire, and Dangerous Things* (1987) was something of a revelation: see e.g. Lakoff's discussion of Rosch's development of a radial theory of categorization.

and literary conceit; in addition to addressing the more traditional linguistic interest in isolated sentences, increasingly reframed in terms of their potential appearance in utterances. Lakoff and Turner (1989) – who later diverged, assuming roles as *primus motor* in the development of NTL and CIT respectively – in this earlier work turn their attention from everyday to literary language, showing how the same conceptual metaphors underlying conventional language play a role in the conceptual structuring of poetic texts and other artifices of the imagination not governed by ordinary pragmatic objectives. Turner's enterprise of uncovering the 'literary mind' and Fauconnier's efforts to improve on contemporary philosophy of language have led to a semantic theory offering important insights. From blending analyses of textual excerpts and other sorts of material – e.g., pictorial – CIT developed the hypothesis that metaphorical meaning emerges in conceptual amalgamation of disparate representational contents in a blended space: 'the power and even the existence of central inferences of the projection come not from the source input space and not from the target input space but only from the blended space' (Turner 1996: 62). Analysis of the butcher-surgeon and bulldozing-boss examples validate this point.

In CMT, metaphors have a *semantic* motivation. Similarly, CIT takes a semantic stance, approaching linguistic phenomena from a psychologically mentalist – rather than, say, behavioural, computational or neuroscientific – point of view.[53] Despite the stated hypothesis of a correspondence between mental and neural mappings – 'we think of the lines in [the Basic Diagram] (lines that represent conceptual projections and mappings) as corresponding to neural coactivations and bindings' (Fauconnier & Turner 2002: 46) – CIT remains, for all intents and purposes, a semantic theory. Consequently, a 'good' blend is defined on semantic grounds, in terms of its effectiveness in expressing an idea, the degree of compression achieved, its adaptability, etc.

The term 'correspondence' is equivocal: does it imply the auxiliary co-occurrence of neural activity or actual identification? This presents something of a Pandora's box.[54] Methodologically speaking, however, the theory is primarily analytical and intuitive, seeking inspiration and suggestive support rather than falsifying or verifying evidence from neuroscience.

NTL – CMT's offspring, developed in the 1990s and onwards (see e.g. Lakoff & Johnson 1999, especially chapters 3-6) – is a neural theory striving to develop a computational model of metaphor: more specifically, of primary metaphors. These are not interpretational but a matter of immediate conceptual mapping via neural connections (Lakoff & Johnson 1999: 57). Primary metaphors are *building blocks* of other kinds of metaphors; and thus, ultimately, metaphoricity is part of the 'cognitive unconscious': an unconscious that, in the spirit of Locke, originates in sensorimotor

[53] The same can be said of other cognitive linguists mentioned in this paper: e.g., Talmy, Langacker, and Sweetser.

[54] CIT's failure to state its position clearly is a likely contributing factor motivating Lakoff's criticism of it for not taking sufficient interest in modeling neural correlates.

experience from which all subjective experience derives (*cf*. the empiricist dictum that nothing is in the intellect that was not first in the senses).

A shift seems to have occurred, placing principal explanatory power in computational modeling of hypothesized neural activity – in consequence, putting aside, or even negating, the experiential dimension of conceptualization. 'Good blends' – as explained in Lakoff's comparison of theories in a discussion on the cogling mailing list (August 2005)[55] – arise from neural optimization. Lakoff explains that blending is just neural binding: a claim based on experimental evidence from the study of primary metaphor (e.g., the conceptualization of quantity in terms of verticality: MORE IS UP). Co-occurrence in experience is simultaneous activation of brain regions. Experiential conflation has no semantic motivation and is solely identified as simultaneous activation of distinct parts of the brain. Frames or domains experienced together are temporally neurally bound: they fire in synch. Neural co-activation is activation flowing along neural connections between distinct brain regions, stimulating synapses to change chemically and grow stronger. The 'mapping' in metaphor is neural circuitry strengthened and made permanent. Multiple mappings across roles in different frames are identified as neural circuits connecting distinct brain regions. *Different frames* equals *different parts*.

I am not sure how the step from the schematic mappings of so-called primary metaphor to the more complex material analyzed in CIT is supposed to be accounted for so as to lead to the conclusion that all blends – including expressive ones – are simply neural bindings. It is not obvious how one would proceed, for instance, in investigating *why* a representation of a surgeon and the concept of butcher would fire in synch. Nor is it obvious how the predicative directionality comes about. The equating of conceptual integration with neural binding seems highly dubious as a proposition about semantic structure. If accepted though, it is understandable why designing integration diagrams appears curiously far removed for Lakoff from what needs to be done.

To address the issue of methodology, one should first consider what can conceivably be gained: what kind of insight is one after? What does one want to know? One must also look at what is technically possible, given the developmental state of contemporary neuroscience. While it seems clear that some categories – e.g., human faces – are localized, it is questionable whether in fact there are 'parts' corresponding to every semantic frame or category. It is not even clear whether every concept activated is necessarily *localized*, nor how mental enactments of meaning play out neurally. Are all semantic frames and categories to be conceived of as localizable circuits? If so, do these show up for observation simply as *activity*?[56] Perhaps the notions of 'domain' and 'frame' *are* becoming synonymous with 'parts of the brain'. This would seem a rather nebulous substitution though, reducing consciously discernible semantic entities to their identification as activity in general regions of the

[55] http://listserv.linguistlist.org/cgi-bin/wa?A2=ind0508&L=cogling&D=1&T=0&P=11634 (accessed 22 August 2013).

[56] This would appear particularly problematic as a motivating assumption for investigative methods if more entrenchment actually reflects *less* activity, due to less cognitive effort – meaning that less neural processing is required.

brain. Whatever the case may be, the observation that two general parts of the brain are active at the same time hardly constitutes a semantic analysis of meaning construction. What is missing is recognition of the expressive function of metaphorical concepts and language *in communication*: for whom do these concepts and expressions exist if not the communicative minds that put them on stage in real-life situations?

If mappings equate to neural circuitry and permanent mappings to strengthened neural circuitry, the question remains: what is it about those mappings that makes them durable? What, besides recurrence – durability, entrenchment – might still make them successful? These are semantic-pragmatic questions.

Obviously, people do not exchange bits of brain in order to communicate. There is another, less tangible dimension to meaning not captured by observations of how the brain works – or by computational models of how the brain might work. From a practical point of view, experientially informed descriptions of representations are a necessary component in any theory of semantic meaning: valuable in and of themselves and as an indispensible prerequisite for investigating their neural realization. In the most basic sense, one needs to know what to look for.

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Metaphor, Lexical Concepts, and Figurative Meaning Construction

This paper addresses the status and significance of conceptual metaphor as an explanatory theoretical construct giving rise to figurative language. While conceptual metaphor has sometimes been presented as the most important element in this process (e.g., Lakoff 2008; Lakoff & Johnson 1999), I argue that conceptual metaphor is but one component – albeit a significant one – in figurative meaning construction. I contend that, while conceptual metaphors inhere in the conceptual system, there is a class of metaphor – *discourse metaphor* – that emerges and evolves in and through language use and inheres in the linguistic system. Indeed, the cognitive units associated with discourse metaphors and other linguistic expressions I refer to as *lexical concepts*. I introduce LCCM theory (Evans 2009b, 2010b, 2013) and suggest that lexical concepts provide access to non-linguistic knowledge representations – *cognitive models* – which can be structured in terms of conceptual metaphors. One aim of LCCM theory is to provide an account of the role of conceptual metaphors and the way they interact with other types of linguistic and conceptual knowledge structures in figurative meaning construction. The paper illustrates how lexical concepts in figurative meaning construction facilitate access both to conceptual metaphors and a specific type of inference – *semantic affordances* (Evans 2010b) – which arise from cognitive models. It is the combination of these types of knowledge representation that give rise to figurative meaning construction in the examples considered here, rather than conceptual metaphors alone. This perspective provides, I suggest, the promise of building towards a joined-up account of figurative meaning construction.

Keywords: Conceptual metaphor, Conceptual Metaphor Theory, lexical concept, discourse metaphor, LCCM theory, figurative language construction, semantic affordance.

1. INTRODUCTION

Since the 1980 publication of *Metaphors We Live By*, Conceptual Metaphor Theory (CMT) has proved to be extremely influential. However, over thirty years on, it is also clear that, while important, the significance of *conceptual metaphor* as an explanatory theoretical construct has sometimes been overstated by Lakoff and his closest collaborators. For one thing, early works in the CMT tradition sought – or at least were perceived as seeking – to supplant significant intellectual traditions dealing with metaphor and, in particular, their explanations for metaphor as a phenomenon. It has become clear that CMT in fact addresses a type of phenomenon that, in large measure, had not been studied or even recognized previously. In contrast, a large set of figurative-language data dealt with in other traditions including philosophy of language and psycholinguistics are barely addressed by conceptual

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metaphor researchers. One of my aims in the present paper, addressed in detail in Section Two, is to tease out what is special about conceptual metaphor and what it cannot account for.

A second tendency in the CMT tradition has been to suggest that conceptual metaphors might be central to core issues relating to language *qua* system. These have included language change and the issue of polysemy. However, a close examination of the linguistic evidence suggests that conceptual metaphor may not be the root cause of either of these phenomena. In Section 3, I examine the claim that conceptual metaphor drives these processes and argue, on the contrary, that usage-based issues play a more central role. I argue that conceptual metaphors do not directly motivate language use. That said, conceptual metaphors remain important for language understanding. Specifically, they may serve as top-down constraints[1] on aspects of language change and the emergence of polysemy.

Finally, one of the issues that has received increased attention in recent years in (cognitive) linguistics relates to meaning construction. It has become clear that well-articulated accounts of figurative language understanding, while involving conceptual metaphors, also require an account of how conceptual metaphors interface with meaning construction mechanisms: for instance, as identified under the aegis of Conceptual Blending Theory (BT: e.g., Coulson 2000; Fauconnier & Turner 2002). Another key issue relates to the role that language plays in (figurative) meaning construction. This is an issue I address in Section 4. In particular, I discuss the role that a recent theoretical model, LCCM theory (Evans 2006, 2009b, 2010b, *2013*), plays in modelling the contribution of conceptual metaphors, other conceptual representations, and language in metaphor interpretations. I have suggested elsewhere (Evans 2010b, *2013*) that LCCM theory is continuous with BT, providing the first detailed means of modelling composition: one of the key mechanisms associated with conceptual integration.

By way of overview, the three main sections of the paper – detailed below – make three specific claims:

- CMT provides an account of just one type of the cognitive representations that must be in play in figurative language understanding. While conceptual metaphors may underpin certain types of figurative language, there are classes of linguistic metaphors that appear to be motivated in ways that are, at least in part, independent of conceptual metaphors.

- Those conceptual metaphors that motivate language use do not do so in an isomorphic way. That is, while conceptual metaphors are invariably activated by instances of language use that draw on them, language is a distinct semiotic system with a level of semantic representation independent of conceptual metaphors and other representations

[1] Zlatev (2011) makes a similar point.

which inhere in the conceptual system. These I refer to as *lexical concepts*[2] (2006, 2009b, 2010b, *2013*). The deployment and development of lexical concepts is central to issues such as semantic change in language and in giving rise to the proliferation of new word meanings: the issue of polysemy.

- An account of figurative meaning construction requires a generalized theory of conceptual integration. Recognizing the psychological reality of conceptual metaphors does not, in and of itself, provide an account of how figurative meaning arises, as mediated by language use. In addition, the analyst requires an understanding of various knowledge types that are implicated in figurative language understanding and use. This includes the language-specific level of semantic representations – lexical concepts – and how they are combined. Also required is an understanding of the range of conceptual metaphors that inhere in the conceptual system and how these are combined, via (something akin to) conceptual blending, as studied by Coulson (2000), Fauconnier and Turner (2002), Grady (2005) and others. Finally, also required is an account of how lexical concepts facilitate activation of conceptual metaphors and other types of conceptual knowledge structures – what I refer to as *semantic affordances* – in the construction of linguistically mediated figurative meaning. All of this involves a joined-up account of linguistic and conceptual integration mechanisms: a generalized theory of conceptual integration.

2. CONCEPTUAL METAPHORS VERSUS DISCOURSE METAPHORS

In this section I argue that the theoretical construct of the conceptual metaphor accounts for just a subset of linguistic metaphors, as manifested in figurative language. In particular, I argue for a disjunction between figurative language that in part – perhaps large part – is motivated by conceptual metaphors and figurative language that is motivated by what I shall refer to as discourse metaphors. The term 'discourse metaphor' is a theoretical construct introduced into the literature by Jörg Zinken (e.g., 2007). I shall adopt and nuance this construct as I proceed.

The essential distinction between conceptual metaphors and discourse metaphors is the following. Conceptual metaphors are independent of language but influence certain types of language use. In contrast, discourse metaphors are linguistically mediated instances of figurative language use. While they presumably have a conceptual basis,[3] they arise in language use to address particular and often specific communicative needs and functions. Moreover, their status evolves as a function of language use such that they can become entrenched linguistic units independent of the conceptual mechanisms

[2] The lexical concept – as a theoretical construct – relates in LCCM theory to a level of cognitive representation that inheres in the linguistic system rather than the conceptual system. See Evans (2009b, *in press*) for further details on the distinction between the linguistic and conceptual systems.

[3] Gentner et al.'s (2001) proposals relating to analogical structure mapping can be interpreted as providing a set of suggestions for the conceptual basis of discourse metaphors.

that may have given rise to them in the first place. This stands in contrast to instances of language use motivated by conceptual metaphor: language use of this type always activates the underlying conceptual metaphor which, crucially, remains (largely) unaffected by language use.

I begin by charting some key developments in the study of conceptual metaphor. I then argue that CMT initially attempted to provide an all-encompassing account of linguistic metaphor. However, due to a large body of linguistic data that simply could not be accounted for in a straightforward way under the aegis of CMT, more recently one prominent conceptual metaphor scholar (Grady 1999) has acknowledged that conceptual metaphor may be a knowledge type that is distinct from a range of other types responsible for linguistic metaphor. Following on from this, I adduce in detail the notion of the discourse metaphor and contrast it with the theoretical construct of the conceptual metaphor.

2.1 An overview of conceptual metaphor theory

In the earliest work in the CMT tradition – especially (Lakoff & Johnson 1980, Lakoff & Turner 1989, Lakoff 1993) – there was a tendency to claim, or at least to suggest, that linguistic metaphor was a consequence of conceptual metaphor. A conceptual metaphor was conceived in this early work as a series of asymmetric mappings stored in long-term memory uniting structure from a more concrete source domain to a more abstract target domain: as in, LOVE IS A JOURNEY. Until relatively recently, evidence for the existence of conceptual metaphor came primarily from language. The following examples, which derive from (Lakoff & Johnson 1980), provide – it is claimed – evidence for the existence of such a conceptual metaphor:

(1) Look *how far* we've *come.* We're at *a crossroads.* We'll just have to *go our separate ways.* We can't *turn back* now. I don't think this relationship is *going anywhere. Where* are we? We're *stuck.* It's been *a long, bumpy road.* This relationship is *a dead-end street.* We're just *spinning our wheels.* Our marriage is *on the rocks.* This relationship *is foundering.*

According to Lakoff and Johnson, the expressions in (1) are all motivated by an entrenched pattern in the mind: a conceptual metaphor. The conceptual metaphor LOVE IS A JOURNEY is made up of a fixed set of well-established mappings (see Table 1). The mappings are fixed in the sense that there a set number of them. They are well-established in the sense that they are stored in long-term memory.

What these mappings do is structure ideas belonging to the more abstract domain of LOVE in terms of concepts belonging to the more concrete domain of JOURNEY. In the domain of LOVE, one has a number of different concepts. These include concepts for lovers, the love relationship, events that take place in the love relationship, difficulties that take place in the relationship, and progress one makes in resolving these difficulties and developing the relationship. One also has concepts for the choices about what to do in the relationship such as moving in together, whether to split up, and so on, and the shared and separate goals one might have for the relationship.

Similarly, Lakoff and Johnson contend that people represent a range of concepts relating to the domain of JOURNEY. These include concepts for the travellers, the vehicle used for the journey – plane, train, or automobile – the distance covered, obstacles encountered such as traffic jams that lead to delays and hence impediments to the progress of the journey, decisions about the direction and the route to be taken, and knowledge about destinations. The conceptual metaphor LOVE IS A JOURNEY provides a means of systematically mapping notions from the domain of JOURNEY onto corresponding ideas in the domain of LOVE. This means that ideas in the LOVE domain are structured in terms of knowledge from the domain of JOURNEY. For instance, the lovers in the domain of LOVE are structured in terms of travellers such that one understands lovers in terms of travellers. Similarly, the love relationship itself is structured in terms of the vehicle used on the journey. For this reason, one can talk about marriage *foundering*, *being on the rocks*, or *stuck in a rut* and understand expressions such as these as relating not literally to a journey but rather to two people in a long-term love relationship that is troubled in some way.

Moreover, it must be the case – so Lakoff and Johnson argue – that one has knowledge of the sort specified by the conceptual metaphor stored in one's head. If this were not so, one would not be able to understand these English expressions: to understand lovers in terms of travellers and the relationship in terms of the vehicles, and so on. The linguistic expressions provide an important line of evidence for the existence of the conceptual metaphor.

Table 1 summarizes the mappings that make up the conceptual metaphor. In Table 1, the arrow signals what is claimed to map onto what. For instance, the concept for travellers from the domain of JOURNEY maps onto the concept for lovers in the domain of LOVE. These corresponding concepts are thus established as paired concepts within the conceptual metaphor. It is because of this one can speak (and think) of lovers in terms of travellers.

Source domain: JOURNEY	**Mappings**	**Target domain: LOVE**
TRAVELLERS	→	LOVERS
VEHICLE	→	LOVE RELATIONSHIP
JOURNEY	→	EVENTS IN THE RELATIONSHIP
DISTANCE COVERED	→	PROGRESS MADE
OBSTACLES ENCOUNTERED	→	DIFFICULTIES EXPERIENCED
DECISIONS ABOUT DIRECTION	→	CHOICES ABOUT WHAT TO DO
DESTINATION OF THE JOURNEY	→	GOALS OF THE RELATIONSHIP

Table 1: Mappings for LOVE IS A JOURNEY.

Since its advent, CMT has often been presented as a perspective that supplants what I will refer to as the received view of metaphor. The received view treats metaphor as primarily a literary/linguistic device in which comparisons highlight pre-existing – albeit potentially obscure – similarities between a target or tenor and a vehicle or base. This position, in which metaphor is conceived as a linguistic means for capturing perceived similarities, has a long and venerable tradition going back in the Western scholarly tradition to Aristotle's *Poetics*. The received view often associates metaphor with a specific form: the 'X is a Y' or predicate nominative construction, as in (2):

(2) Dew is a veil.

In an example such as this, the received view holds that properties and relations associated with dew covering grass and a veil covering a woman's face are compared. In early work on linguistic metaphor in the psycholinguistic tradition, the conceptual process assumed to underlie metaphors such as this was that of feature mapping. In this process, properties belonging to different entities were compared and judged to be overlapping (Miller 1979, Ortony 1979, Tversky 1977). There is some empirical support for this view. For instance, the degree of similarity between tenor and vehicle concepts has been demonstrated as correlating with aptness and interpretability of linguistic metaphors (Johnson & Malgady 1979; Malgady & Johnson 1976; Marschark, Katz & Paivio, 1983) as well as the processing time required to understand a linguistic metaphor (Gentner & Wolff 1997).

However, Lakoff (1993) and his various collaborators, including Mark Johnson (Lakoff & Johnson 1980) and Mark Turner (Lakoff & Turner, 1989), argued vociferously against explanations for linguistic metaphor based on similarity. After all, when one conceptualizes love in terms of journeys, there is nothing objectively similar about the two. If two things are similar then, in principle, the tenor and vehicle should be equally adept at being deployed to understand the other. One would expect to find a symmetric or bi-directional process, along the lines advocated by e.g. Black (1979) in his interactional theory of metaphor. However, as Lakoff and Johnson and Lakoff and Turner showed, expressions relating to love and journeys are not symmetric in this sense. After all, while one can describe two newlyweds as having started on their journey and be understood as referring to the commencement of their married life together, one cannot refer to people starting out on a car journey as having just got married and be understood as referring to the car journey itself.

Central to the CMT account is the claim that conceptual metaphors are asymmetric, as reflected by the directionality of the arrows in Table 1: from the source to the target domain. Crucially, according to Lakoff, Johnson and Turner, what motivates the emergence of a conceptual metaphor, rather than similarity, is the nature of embodied experience. Conceptual metaphors are held to arise from tight and recurring correlations in experience. In the case of LOVE IS A JOURNEY, love is an instance of a purposeful activity. As journeys correlate with – indeed are instances of – purposeful activities, the LOVE IS A JOURNEY metaphor can be viewed as an instance of the more general conceptual metaphor: A PURPOSEFUL ACTIVITY IS A JOURNEY.

In a more recent version of CMT, the experiential grounding of conceptual metaphor is formalized in terms of the theoretical construct known as a *primary conceptual metaphor*, or *primary metaphor* for short (Lakoff & Johnson 1999; Grady 1997a, 1997b). Primary metaphors are hypothesized to be directly grounded in experience, arising from experiential correlations. They can be unified via the process of conceptual blending (Grady 1997b, 2005), giving rise to compound – or complex – conceptual metaphors, of which LOVE IS A JOURNEY is claimed as an instance. That is, LOVE IS A JOURNEY might arise via fusion of more fundamental – in the sense of directly grounded – primary metaphors such as A PURPOSEFUL ACTIVITY IS A JOURNEY, STATES ARE LOCATIONS, and so on. LOVE IS A JOURNEY is vicariously grounded in experience, but the grounding is not direct as with primary metaphors.

In the most recent version of CMT, Lakoff (e.g., 2008) argues for a neural perspective on conceptual metaphor. He proposes that primary metaphors arise via mechanisms of Hebbian learning: correlations in experience give rise to correlated firing of neurons; what fires together wires together. It is for this reason that primary metaphors such as CHANGE IS MOTION (e.g., *that species is going extinct*), KNOWING IS SEEING (e.g., *I see what you mean*), and INTIMACY IS PROXIMITY (e.g., *those two are still close, even after all these years*) naturally arise cross-linguistically. They do so because they form fundamental recurring units (*primary scenes* in the parlance of Grady 1997a) of human experience.

2.2 Correlation versus resemblance

While many linguistic metaphors do indeed appear to be the result of conceptual metaphor in the sense provided in the previous subsection, a large set of figurative language expressions do not appear to relate to a system of mappings, in contrast to compound metaphors such as LOVE IS A JOURNEY (see Table 1). Such linguistic metaphors appear not to exhibit a direct grounding in experience either, in contrast to primary metaphors. A case in point concerns poetic metaphor. To make this clear, consider the following translation of the poem *Free Union* by the French surrealist poet André Breton:

> My wife whose hair is brush fire
> Whose thoughts are summer lightning
> Whose waist is an hourglass
> Whose waist is the waist of an otter caught in the teeth of a tiger
> Whose mouth is a bright cockade with the fragrance of a star of the first magnitude
> Whose teeth leave prints like the tracks of mice over snow
> Whose tongue is made out of amber and polished glass
> Whose tongue is like a stabbed wafer

A range of linguistic metaphors are evident in this poem, in which one entity – the poet's wife – is being understood in terms of an attribute or facet of another. For example, the poet asks one to think of his wife's waist in terms of an hourglass.[4]

[4] See the discussion of this in (Lakoff & Turner 1989).

In their 1989 book *More Than Cool Reason*, George Lakoff and Mark Turner attempt to apply the core insights of CMT to poetic metaphor. Yet Lakoff and Turner are, in effect, forced to concede that a significant proportion of poetic metaphor – as exemplified by the poem above – cannot be accommodated in a straightforward way by CMT. By denying a role for comparison or similarity and claiming that linguistic metaphors are motivated by asymmetric conceptual mappings deriving from embodied experience, how are metaphors of the sort exhibited in the poem to be accounted for?

The solution is something of a fudge. Lakoff and Turner concede that linguistic metaphors of the sort apparent in *Free Union* are not grounded in experiential correlation. They called metaphors of this sort *image metaphors*. An image metaphor involves understanding one entity in terms of aspects of the perceptual experience associated with another. Yet, they attempt to retain parts of the CMT account by claiming that image metaphors still involve conceptual metaphor. However, the nature of the conceptual metaphor process is a 'one shot': i.e., a single mapping involving structuring the target concept asymmetrically in terms of the source. One difficulty for such an account is that it cannot exclude a bi-directional relationship between target and source. After all, in CMT as classically formulated, the asymmetry that holds between target and source is a consequence of an apparent distinction between abstractness as in LOVE and concreteness as in JOURNEY. In what sense is a female waist any more or less abstract or concrete than an hour glass? The poet might as well have described the splendour of an hourglass and borrowed attributes of his wife to describe the hourglass.

A further problem is that, in later versions of CMT with the advent of the construct of primary metaphor – which also involves a single mapping between source and target – there is a clear experiential basis: a correlation that motivates the conceptual metaphor. Yet poetic metaphor of the type apparent in *Free Union*, while in some ways akin to primary metaphor (e.g., involving a single mapping between two concepts), is not plausibly motivated by recurring and ubiquitous correlations in experience. This begs the question how to account, in a principled way, for the apparent disjunction between image metaphors on one hand and primary metaphors on the other, while attempting to retain CMT – which is to say, a one-size-fits-all perspective – for the entire gamut of metaphoric phenomena.

In addition to so-called image metaphors, an additional class of linguistic metaphors pose difficulties for the CMT account. These include those linguistic metaphors associated with the predicate nominative form that have traditionally been studied in the literary and philosophy-of-language traditions. Examples include:

(3) a. Juliet is the sun.
b. Achilles is a lion.
c. Sam is a wolf.
d. My lawyer is a shark.
e. My job is a jail.
f. My boss is a pussycat.

One of the clear difficulties for CMT with examples of this type – as well as the image metaphors discussed above – is maintaining that they have an experiential basis. Sometimes they may plausibly have, as in:

(4) Sally is a block of ice.

Grady (1999) suggests that an example such as this may be motivated – at least in part – by the conceptual metaphor INTIMACY IS PROXIMITY. This primary conceptual metaphor is presumably grounded in the experiential correlation that holds in human experience between intimacy and proximity.

What is less clear is how other examples that share this form might be motivated by experiential correlation. To make this clear, consider the example in (3f). A linguistic example such as this is normally interpreted to mean that the boss in question is friendly, docile – perhaps easily manipulated. For this example to have an experiential basis in the sense of CMT, the boss would need to be seen consistently with a cat. It is recurring and inevitable co-occurrence – correlation – which, one should recall, provides conceptual metaphor – held to motivate linguistic metaphor – with its experiential basis. However, one can deploy the expression in (3f) to refer to 'my boss' without having ever experienced a correlation between 'my boss' and 'pussycat'.

With characteristic insight, Joseph Grady, a former student of George Lakoff and the pioneering force behind the notion of primary metaphor, has recognized (1999) that conceptual metaphor cannot be maintained as providing an account for all types of linguistic metaphor. He observes that linguistic metaphors of the sort captured in (3) appear not to have the same basis as primary metaphors or conceptual metaphors that seem to invoke primary metaphors: namely, compound metaphors such as LOVE IS A JOURNEY. To account for this, he invokes a distinction between what he refers to as metaphors based on correlation and those based on what he terms resemblance. In so doing, Grady is saying something more in keeping with the received view so roundly criticized by Lakoff, Johnson, and Turner.

For Grady, linguistic metaphors such as those exemplified in (3) are resemblance based. That is, they invoke a level of functional resemblance. For instance, with respect to the example in (3f), a property associated with pussycats – their docility – is attributed to a particular individual labelled 'my boss'. Image metaphors might then be seen as also involving resemblance – the resemblance in question being perceptual rather than functional.

Grady effectively concedes that a – presumably large – subset of linguistic metaphors are not motivated by conceptual metaphor: those that are grounded in experience and hence correlational in nature. This conclusion is important in at least two ways. First, it asserts that the claim for conceptual metaphor as the underlying motivation for all linguistic metaphors may not, in fact, hold. There may well be a class of linguistic metaphors that are motivated – in some sense – by comparison. Second, far from undermining CMT, it demonstrates how CMT successfully identifies a type of linguistic

metaphor that had not previously been studied in a systematic way. Metaphors of this kind – as evident, for example, in (1) – plausibly have an experiential basis.

2.3 The distinction between conceptual and discourse metaphors

In this section I outline some of the key differences between conceptual metaphor and resemblance – or, as I prefer, discourse metaphor. I argue that resemblance metaphors are a subset of discourse metaphors.

It is often suggested in the literature that conceptual metaphors are activated automatically during language use. Lakoff and Turner (1989) claim that, when linguistic metaphors appear so hackneyed and conventional they no longer pass for metaphors at all – as in everyday expressions such as *long* in *a long time* – this demonstrates that the conceptual metaphor (in this case DURATION IS LENGTH) is alive and well. In the last decade, psycholinguistic and psychophysical behavioural evidence has begun to provide highly suggestive empirical support for this view.

The paradigm case study in the experimental psychology literature for investigating the psychological reality of conceptual metaphor is space-to-time mappings. Recent evidence has begun to suggest that aspects of time are, indeed, structured in terms of space. Important experimental support is reported in (McGlone & Harding 1998, Boroditsky 2000, Núñez *et al.* 2006).[5] Perhaps the most telling study to date in this area is reported in (Casasanto & Boroditsky 2008). In their study, Casasanto and Boroditsky employed a 'growing lines' experimental paradigm in which lines 'grow' across a computer screen for different lengths and for different time periods before disappearing. Subjects were then asked to evaluate either the spatial extent or the duration of the lines. Casasanto and Boroditsky found that the subjects' evaluations of spatial extent were not influenced by duration, while evaluations of duration were influenced by spatial extent. In other words, the space-to-time mapping is asymmetric in the way predicted by CMT. Perhaps more importantly for present purposes, the conceptual metaphor is activated automatically and – in this experiment – in the absence of language. Put another way, subjects cannot help activating spatial representations when performing temporal processing. This finding appears to support the view that conceptual metaphors are automatically activated and highly entrenched in the conceptual system, as claimed by Lakoff and Johnson.

Now consider discourse metaphors. As I have already shown, a varied class of linguistic metaphors – including so-called 'image' metaphors, those associated with the predicate nominative 'X is a Y' form, and lexical blends (e.g., *frankenfood*: Zinken 2007) – appear not to be grounded in experience, in the sense claimed by CMT. These 'resemblance' metaphors I dub discourse metaphors (see e.g. Zinken 2007)[6] because the key property associated with metaphors of this kind is that they

[5] For a wide-ranging literature review, see (Evans 2013).

[6] While Zinken introduced the term 'discourse metaphor' into the literature, my use departs from Zinken's somewhat narrower definition.

appear contingent on language use. They arise to facilitate communicative intentions and consequently can evolve over time, either becoming highly entrenched lexical metaphors or dropping out of use altogether. Unlike conceptual metaphors, discourse metaphors appear not to be independent of language: they arise in the context of language use.[7] Also unlike conceptual metaphors, they are not stable but rather evolve, mediated by the ways and contexts in which they are deployed.

To take one example, consider the lexical metaphor *frankenfood*. The term was first used in the mid 1990s, particularly in Europe, propagated by NGOs such as Friends of the Earth in response to the perceived dangers of foodstuffs making use of genetically modified (GM) crops. As the perceived threat of GM foods diminished, the term became less frequent in public discourse (Zinken 2007). Zinken argues that discourse metaphors arise to fulfil a specific communicative function. When that function is no longer required, the discourse metaphor may disappear.

Another example of how discourse metaphors are influenced by use relates to the following. Discourse metaphors can become lexicalized and so re-analyzed as having a different semantic function from the one they originally arose to signal. A clear example of this is the metaphoric use of the word *tart*. It was originally applied in the Nineteenth Century to describe a well-dressed or attractive girl or woman and took the form of a positive evaluation. However, its narrowed application to a subset of attractive and even gaudily dressed women – namely, prostitutes – led to its developing a negative evaluative function. This semantic process has continued, such that the term *tart* is now applied widely to express a negative assessment of fidelity across a range of semantic fields. An attested recent example in the British national press is the expression *credit card tart*: a consumer who serially switches credit-card companies to gain the best interest rate or introductory interest-free offer. This example demonstrates one consequence of the use of discourse metaphors: they can take on more abstract semantic functions than those they were originally employed to express. That is, discourse metaphors, when first deployed, are somewhat novel. As they become better established, they appear to take on a more generic meaning, which corresponds to them becoming more entrenched. Based on this observation, Glucksberg has argued (2001, Glucksberg & Keysar 1990) that what I refer to as discourse metaphors behave like lexicalized categories. A tart is a paradigm example of such a category: a person whose fidelity is unreliable in any sphere.

Bowdle and Gentner (2005) have put forward a hypothesis – the Career of Metaphor Hypothesis – that captures the observed trajectory for what I refer to as discourse metaphors. They propose that discourse metaphors exhibit a cline in terms of conventionality, following an evolutionary career that reflects their usage. When a new discourse metaphor first emerges, it is highly novel. Following Gentner's Structure Mapping hypothesis (Gentner 1983, Gentner *et al.* 2001), Bowdle and Gentner propose that discourse metaphors are motivated by establishing an analogical relationship between one idea and another. In other words, discourse metaphors facilitate projection of a system of relations

[7] I am not claiming that discourse metaphors do not rely on conceptual processes for their formation. I am simply claiming that language appears essential to their formation and propagation: a situation that is not the case with conceptual metaphors.

from one domain onto another, regardless of whether the source and target domains are intrinsically similar. The Career of Metaphor Hypothesis contends that, over time, the inferences associated with analogical mapping becomes entrenched such that the discourse metaphor becomes lexicalized. One consequence is that, at the conceptual level, the structure-mapping operation closes down – in contrast to conceptual metaphor, where it remains active in the conceptual system. Another is that the lexicalized discourse metaphor takes on more abstract properties, serving as a reference point for a particular category of things.

To illustrate, take the word *roadblock* considered by Bowdle and Gentner (2005: 198). 'There was presumably a time when this word referred only to a barricade set up in the road. With repeated use as the base term of metaphors such as *Fear is a roadblock to success*, however, *roadblock* has also come to refer to any obstacle to meeting a goal.'

The Career of Metaphor Hypothesis has empirical support. A robust finding in metaphor comprehension studies (e.g., Blank 1988, Coulson 2008, Giora 2008) is that conventional metaphors are understood more quickly than novel ones. This is only to be expected if the Career of Metaphor Hypothesis is correct. After all, once discourse metaphors have become lexicalized, they are entrenched as part of the linguistic system; this *should* lead to faster retrieval.

In sum, I suggest that there are good reasons for distinguishing between two quite distinct types of metaphor. Conceptual metaphors are mappings that inhere in the conceptual rather than the linguistic system. They are relatively stable in long-term memory and are invariably activated during symbolic processing, whether due to linguistic or non-linguistic processing. In contrast, discourse metaphors arise in language use, to facilitate a linguistically mediated communicative intention. They are made possible, initially, by generalized analogical processing at the conceptual level. The inferences that arise from this process become lexicalized as part of the lexical concept associated with the discourse metaphor form and so become detached from the conceptual system. This process of re-analysis results in a discourse metaphor that is more schematic and abstract in nature: one that can refer to abstract properties found in the original motivating communicative context but which applies to a wider range of contexts. In other words, discourse metaphors evolve from novel analogies to lexicalized units that embody an abstract category.

3. DISSOCIATION BETWEEN LANGUAGE AND CONCEPTUAL METAPHORS

One of the assumptions that conceptual metaphor researchers often appear to make is that conceptual metaphors directly motivate patterns in language usage. In this section, I examine and nuance this claim. While conceptual metaphors are clearly important in language processing – as empirically verified by a range of behavioural studies (e.g., Boroditsky 2000, McGlone & Harding 1998, Gentner *et al.* 2002) – they are not the whole story. As I argue below, it is difficult to maintain that conceptual metaphors are solely responsible for figurative language. More specifically, I show that conceptual metaphors do not motivate figurative language in a direct way. While conceptual metaphors do have a

constraining influence on linguistic expressions, language represents a semiotic system that is, in principle, distinct from the conceptual system: the venue for conceptual metaphors. The linguistic system is subject to language-internal pressures giving rise to semantic units that are, in principle, independent from conceptual metaphors (Evans 2009b). This level of cognitive representation is what I refer to as the lexical concept (2006, 2009a, 2009b, 2013). While conceptual metaphors may have a constraining influence on the nature of lexical concepts, nevertheless, lexical concepts operate independently of conceptual metaphors. Usage patterns in language are not predictable on the basis of conceptual metaphors alone, but arise on the basis of lexical concepts in the linguistic system *and* conceptual metaphors – and, indeed, other types of representation in the conceptual system.

3.1 Evidence for a dissociation between conceptual metaphors and lexical concepts

There are good grounds for thinking that conceptual metaphors, while part of the story, under-determine the linguistic metaphors that show up in language use. Consider the conceptual metaphor STATES ARE LOCATIONS. It has been claimed in the CMT literature that this metaphor motivates examples of the following kind:

(5) We are in love/shock/pain (*cf.* we are in a room).

(6) We are at war / variance / one / dagger's drawn / loggerheads: 'state' sense (*cf.* we are at the bus stop: 'spatial' sense).

(7) We are on red alert / (our) best behaviour / the look-out / the run: 'state' sense (*cf.* we are on the bus: 'spatial' sense).

While the English prepositions *in*, *at*, and *on* relate canonically to spatial relations of particular kinds, it is due to conceptual metaphor – so Lakoff and Johnson (e.g., 1999) claim – that they can refer to abstract states such as love, war, red alert, and so forth. However, conceptual metaphor does not predict why there are different patterns in the sorts of states that can be encoded by different prepositions in English. After all, the semantic arguments that ordinarily co-occur with *in*, *at*, and *on* are constrained. While one can be *in* love, shock, pain, or trouble, the semantic arguments that collocate with *at* and *on* are unacceptable applied to *in*, as demonstrated below (signalled by an asterisk):

(8) *We are in war / variance/ one / dagger's drawn / loggerheads: 'state' sense.

(9) *We are in red alert / (our) best behaviour / the look-out / the run.

Similarly, the semantic arguments that collocate with *in* and *on* do not collocate with *at*, and so on. Closer examination of the linguistic facts suggests that the way in which semantic arguments collocate is preposition-specific (= form-specific). Take *in* and *on* by way of illustration:

(10) a. John is in trouble/danger.
b. Jane is in love/awe.
c. Fred is in shock.
d. Jake is in a critical condition.

(11) a. The guard is on duty.
b. The blouse is on sale.
c. The security forces are on red alert.

While both *in* and *on* encode abstract states, the kinds of states they encode appear to be of quite different kinds, as evidenced by the range of object arguments they take. The semantic arguments that *on* selects for relate to states that normally hold for a limited period of time and that contrast with salient states in which the reverse holds. For instance, being *on duty* contrasts with being *off duty*: the normal state of affairs. Likewise, being *on sale* is temporally limited. Sales occur for limited periods at specific times during the year: e.g., a winter sale. Being *on red alert* contrasts with the normal state of affairs, in which a lesser security status holds. For all of these, the states in question can be construed as volitional: i.e., to be *on duty / sale / red alert* requires a volitional agent who decides that a particular state will hold and takes the requisite steps to bring such a state of affairs about.

In contrast, the semantic arguments selected for by *in* relate to states that do *not* necessarily hold for a limited period of time and do not contrast in any obvious way with a 'normal' state of affairs. While states encoded by *on* are – in some sense – volitional, states associated with *in* are – again, in some sense – non-volitional. One does not usually choose to be *in love*, *in shock*, or *in a critical condition*; nor can one normally, by conscious act of will, bring such states about. These states are ones people are affected, constrained, and influenced by, rather than ones that are actively – in the sense of consciously – chosen.

Detailed linguistic analysis reveals that the range of states encoded by *in* and *on* exhibit even more-fine-grained distinctions, which nevertheless adhere to the general preposition-specific generalization I just outlined. Consider *in* first:

(12) a. The cow is in milk.
b. The girl is in love.
c. John is in trouble/debt.
d. He's in banking [i.e., works in the banking industry].

While each of these examples relates to a 'state' of some kind, each relates to a slightly different sort of state: that which has a physical cause (12a) – the state of being 'in milk', a consequence of the physical production of milk; that which has a psychological or emotional cause (12b) – the consequence of a subjective state that may or may not have physical (i.e., observable) manifestations; that which has a social/inter-personal cause (12c) – the result of social/interpersonal interactions that

result in an externally maintained state; and, finally, that which results from a habitual professional activity (12d). Each of these states takes distinct semantic arguments, relating a particular entity to quite different sorts of states. *In* appears to select for semantic arguments that relate to a delimited set of state types that can be categorized as follows:

Physiological state, resulting in a 'product'.

(13) a. The cow is in milk.
b. The cow is in calf.
c. The woman is in labour.

Psychosomatic state: i.e., subjective/internal state.

(14) a. John is in shock/pain (over the break-up of the relationship).
b. John is in love (with himself/the girl).

Socio-interpersonal state: i.e., externally maintained state.

(15) a. The girl is in trouble (with the authorities).
b. John is in debt (to the tune of £1000/to the authorities).

Professional state: i.e., professional activity habitually engaged in.

(16) a. He is in banking.
b. She is in insurance.

Now consider *on*. The semantic arguments selected for by *on* appear to relate to adjectives or nouns of action involving a particular state that can be construed as 'active' or 'functional', in contrast to a (perhaps) normative scenario in which the state does not hold. In other words, states described by *on* are often temporally circumscribed: they endure for a prescribed or limited period of time. In this way, the states referred to are quite distinct from those that *in* describes: the notion of being non-volitionally affected – apparent with *in* – is almost entirely absent. Consider some examples:

(17) a. on fire
b. on live (i.e., a sports game)
c. on tap (i.e., beer is available)
d. on sleep (as in an alarm clock on a particular mode)
e. on pause (as in a DVD player)
f. on sale
g. on loan
h. on alert
i. on best behaviour
j. on look-out
k. on the move

l. on the wane

m. on the run

What does this reveal about the existence of conceptual metaphors? The distinct collocational patterning associated with the state meanings of English prepositions like *in* and *on* is not predicted by positing a general STATES ARE LOCATIONS conceptual metaphor. This does not necessarily mean that one does not exist.[8] What it does reveal is that the kind of states encoded by particular forms pattern in ways not predicted by – and, in principle, independent of – a more abstract level of conceptual metaphor.

Empirical findings such as these have led me to posit a dissociation between conceptual metaphor and the level of cognitive representation I refer to (e.g., 2004, 2009b, 2010a, 2010b, 2013) as that of lexical concepts. While a conceptual metaphor provides a level of non-linguistic – which is to say, conceptual – organization instantiated in long-term memory, which presumably constrains the nature and range of lexical concepts, a lexical concept is a unit of purely linguistic semantic knowledge. [9] Lexical concepts are conventionally paired with forms. Among other things, they specify the range of semantic arguments that a lexical form can pair with. In (2010a) I argue that, while *in* has conventionally paired with it the distinct lexical concepts [PHYSIOLOGICAL STATE], [PSYCHO-SOMATIC STATE], [SOCIO-INTERPERSONAL STATE], and [PROFESSIONAL STATE], corresponding to the examples in (13), (14), (15), and (16), the preposition *on* has paired with it the lexical concept [ACTIVE STATE].

[ACTIVE STATE] versus [PHYSIOLOGICAL STATE], [PSYCHO-SOMATIC STATE], [SOCIO-INTERPERSONAL STATE], and [PROFESSIONAL STATE] reflect a distinction in the types of states conventionally associated with each preposition. In sum, the way English language users differentially deploy *in* and *on* suggests that, in addition to a putative STATES ARE LOCATION conceptual metaphor, they use more specific lexical concepts, which are specific to each form.

3.2 Language change

In the CMT literature, it has sometimes been claimed (e.g., Heine *et al*. 1991; Lakoff & Johnson 1999; Sweetser 1988, 1990) that conceptual metaphors directly motivate language change. In this section, I briefly address this issue. As in the previous section, I conclude that, while conceptual metaphors may have a role in constraining the directionality of language change, the linguistic facts are better accounted for by assuming that language change is effected at the linguistic level – operating at, and

[8] As lexical concepts are language specific, my claim is that cognate forms for *in*, *on,* and *at* may not provide the same range of lexical concepts. Indeed, there are multiple languages where the ideas conveyed in (17), using *on*, would have to be rendered in quite different ways.

[9] A lexical concept – a central idea in LCCM theory (Evans 2009b, 2013) – is a cognitive representation that forms part of the linguistic rather than the conceptual system. While a lexical concept is a concept *qua* unit of knowledge, it is relatively impoverished; it does not, of itself, facilitate rehearsals of non-linguistic information such as perceptual knowledge: i.e., simulations. To claim that a lexical concept does not inhere in the conceptual system does not entail that it is not a mental representation (for full details, see Evans 2009b).

on, lexical concepts and driven by usage. First, I consider the type of grammatical change known as grammaticalization. I then examine semantic change leading to the rise of polysemy.

Grammaticalization is the phenomenon whereby a linguistic expression undergoes form-function re-analysis such that a lexical item shifts from the open-class to the closed-class system (e.g., Bybee *et al.* 1994, Heine *et al*. 1991, Heine & Kuteva 2007). It also applies to linguistic units that have already undergone grammaticalization, resulting in more grammaticalized units. To demonstrate that grammaticalization is motivated by conceptual metaphor, evidence is required of a shift in an expression's function from a more concrete to a more abstract domain. An example would be a shift from SPACE to TIME, motivated by one or more of the space-to-time conceptual metaphors that have been posited in the literature (e.g., Lakoff & Johnson 1999, Moore 2006).

Because conceptual metaphors involve two domains – a source and a target – a CMT account of grammaticalization predicts that form-function re-analysis holds at the level of domains. If conceptual metaphor directly motivated language change, one would expect to see grammaticalized linguistic units that exhibit either a meaning relating to a concrete domain or one that corresponds to the more abstract target domain. In other words, the prediction is that conceptual metaphors motivate language change such that there is a discrete shift from one domain to another. Examples that fall somewhere between source and target domains might be seen as counterevidence for the metaphorical extension account.

For example, it has been claimed that the conceptual metaphor TIME IS OBJECTS IN MOTION (ALONG A PATH) has led to the grammaticalization of the construction (*be*) *going to*. At one point in the history of the language, this construction related only to an ALLATIVE (i.e., motion) meaning. The conceptual metaphor extension account holds that the concrete ALLATIVE meaning has evolved a more abstract – and hence more grammaticalized – FUTURE meaning (Heine *et al.* 1991, Sweetser 1988). These meanings are illustrated below:

(18) a. John is going to town. [ALLATIVE]
b. It is going to rain. [FUTURE]

However, the *be going to* construction exhibits senses that are intermediate between those exhibited in (18). Consider the following:

(19) a. I'm going to eat.
b. John is going to do his best to make Mary happy.

While *be going to* in (18a) has a purely ALLATIVE meaning and *be going to* in (18b) a purely FUTURE meaning, (19a) has a meaning of INTENTION. It is possible to view this sense as having a remnant of the spatial (ALLATIVE) meaning: the speaker must move to an appropriate location to facilitate the act of eating. This contrasts with (19b), which encodes INTENTION and PREDICTION, has but no spatial (ALLATIVE) sense. Examples like (19a) and (19b) are potentially problematic for a conceptual

metaphor account, showing that grammaticalization involves a continuum of meanings, not a clear-cut semantic shift from one domain (SPACE) to another (TIME).

If grammaticalization is *not* directly motivated by conceptual metaphor, what gives rise to the apparent semantic shifts? An increasing number of scholars propose that language use provides the motivating context for language change: e.g. (Evans & Enfield 2000, Traugott & Dasher 2004). The nuances in meaning apparent in examples such as (19) are better accounted for by assuming that contextualized inferences – which Traugott and Dasher call *invited inferences* – emerging in specific contexts of use where two or more meanings are apparent – what Evans and Enfield refer to as *bridging contexts* – give rise to form-function re-analysis: i.e., a form comes to be associated with a new meaning. Through recurrence of invited inference in similar bridging contexts, the situated inference is re-analysed and, through a process of de-contextualization, gives rise to an entrenched semantic unit: a new lexical concept. This account, which views language-in-use rather than conceptual metaphor as the engine of change, better accords with the observable facts.

Now consider the issue of semantic change itself: semantic change results in a new sense unit coming to be associated with a lexical form. This results in the phenomenon known as polysemy, where a single form is conventionally associated with two or more related sense units. In his classic work on the preposition *over*, Lakoff (1987) reserves a central role for conceptual metaphor in the rise of polysemy. More recently, Tyler and I (Tyler & Evans 2001, 2003) have argued that the semantic networks associated with word forms, of which *over* is a paradigm example, are better accounted for in terms of sense extension via the usage-based explanation described above – giving rise to new lexical concepts. That is, semantic change and the emergence of polysemy are consequences of changes in the linguistic system rather than being directly motivated in the top-down way offered by CMT, according to which conceptual metaphors direct semantic change.

Consider the following examples, which are representative of what Tyler and I describe as an [ABOVE] and a [COVERING] lexical concept respectively:

(20) a. The lamp is over the table.
b. The clouds are over the sun.

In (20a), the natural reading involves a spatio-geometric configuration such that the lamp is higher than, and in a region that at least partially overlaps with the vertical axis of, the table. In (20b), no such spatio-geometric relationship holds. At least from an earth-bound perspective, the clouds are lower than the sun. The reading conventionally associated with (20b) concerns a covering relationship: the sun is covered – occluded from view – by the clouds. The appropriate reading – 'above' versus 'covering' – appears to be, at least in part, a function of the word *over*, which in these examples has two distinct meaning units conventionally associated with it.

Diachronically, the [ABOVE] lexical concept precedes the [COVERING] one. Indeed, the [ABOVE] lexical concept appears to be among the earliest – if not *the* earliest – lexical concept associated with

over in the history of the language (Tyler & Evans 2003). Given that semantic change is a motivated process, it stands to reason that [COVERING] emerged from [ABOVE] – or from a lexical concept itself derived ultimately from [ABOVE].

Tyler and I have argued that the most plausible motivation for the emergence of the [COVERING] lexical concept derives from usage contexts in which an [ABOVE] meaning implies a covering interpretation. That is, we propose that semantic change, resulting in the emergence of polysemy, involves a bridging context. Consider the following example:

(21) The tablecloth is over the table.

This sentence describes a spatial scene in which one entity – the one above – is larger than the landmark entity, located below. Because the tablecloth is larger, and located higher, than the table, the tablecloth covers and so occludes the table from view. In other words, covering is a situated inference: it emerges in this context as a function of the spatio-geometric relation between the table and the tablecloth. The use of *over*, in contexts such as these, leads to this situated implicature becoming detached from its context of use and re-analysed as a lexical concept in its own right. Following pioneering work on semantic change by Elizabeth Closs-Traugott (e.g., Traugott 1989), Tyler and I refer to this process of detachment and re-analysis as *pragmatic strengthening*. The rampant polysemy exhibited by words is primarily a function of changes to the linguistic system, resulting in the emergence of new lexical concepts – driven by usage rather than by conceptual metaphor.

4. THE NATURE OF FIGURATIVE MEANING CONSTRUCTION

Of course, knowing that conceptual metaphors have psychological reality does not, in and of itself, facilitate an account of figurative meaning construction. For one thing, conceptual metaphors are relatively stable knowledge structures, while meaning is a flexible, open-ended, and dynamic process. For another, as I have previously argued, conceptual metaphors cannot account for more than a subset of the figurative language that arises in ordinary language use.

Recently, Fauconnier and Turner have developed a theory of Conceptual Blending (BT), which provides a programmatic account of the sorts of conceptual processes likely to be implicated in the process of (figurative) meaning construction. While integration – or *blending* – appears to be fundamental to meaning construction, conceptual integration is likely to take many different forms (Evans 2010b). Moreover, any account must grapple with the role of language as it interfaces with non-linguistic knowledge structures. Careful dissection is required of the nature of linguistic and non-linguistic representations and how they interface (Evans 2009b, 2010b). This work has yet to be done in any detail.

Nevertheless, it is becoming clear what the desiderata are for a generalized theory of conceptual integration. First, one requires an account of the roles of linguistic and non-linguistic knowledge in

meaning construction. This includes discourse metaphors and lexical concepts, which lie at the linguistic end of the knowledge continuum, as well as conceptual metaphors and other conceptual knowledge representation, which reside in the conceptual system. Second, one requires a means of modelling the compositional and inferential processes that facilitate integration.

Recently, I have begun to develop an account of linguistically mediated meaning construction:the Theory of Lexical Concepts and Cognitive Models, or LCCM theory for short. This accords with the agenda developed by Fauconnier and Turner (2002) for BT. One of the aims of LCCM theory is to provide a detailed account of the principles that guide composition: among the fundamental aspects of conceptual integration. It attempts to provide a principled account of the integration of linguistic content (semantic structure) and conceptual content (conceptual structure): one of the key issues in meaning construction. I briefly introduce the LCCM approach to figurative language before discussing how it allows one to model the way language facilitates the activation of conceptual metaphors and other non-linguistic knowledge structures in the construction of figurative meaning.

4.1 LCCM theory: An overview

LCCM theory (Evans 2006, 2007, 2009a, 2009b, 2010a, 2010b, 2013) accounts for lexical representation and semantic composition in language understanding. It models the nature of symbolic units in language: in particular, semantic structure; the nature of conceptual representations; and the compositional mechanisms that give rise to the interaction between these two sets of representations – the semantic and the conceptual – in service of linguistically mediated meaning construction. LCCM theory derives its name from two theoretical constructs that are central to the model developed: the lexical concept and cognitive model.

LCCM theory's overarching assumption is that the linguistic system emerged, in evolutionary terms, much later than the conceptual system. On this account, the utility of a linguistic system is that it provides an executive control mechanism to facilitate the deployment of conceptual representations in service of linguistically mediated meaning construction. Hence, 'semantic' representations in the two systems are qualitatively distinct. I model *semantic structure* – the primary semantic substrate of the linguistic system – in terms of the theoretical construct of the *lexical concept* (see Evans 2009b for details). A lexical concept is a component of linguistic knowledge – the semantic pole of a *symbolic unit*, in Langacker's (e.g., 1987) terms – encoding a bundle of various types of highly schematic *linguistic content* (see Evans 2006, 2009a, 2009b, 2013).

While lexical concepts encode highly schematic linguistic content, a subset – associated with open-class forms – are connected, and hence facilitate access to the conceptual system. Lexical concepts of this type are *open-class lexical concepts*.[10] Such lexical concepts are typically associated with multiple *association areas* in the conceptual system, collectively referred to as its *access site*.

[10] See Evans (2009b) for my rationale.

The linguistic system evolved to harness the representational power of the conceptual system for purposes of communication. The human conceptual system – at least in outline – is not far removed from that of other primates (Barsalou 2005) and shows similarities with yet more species (Hurford 2007). In contrast to the linguistic system, the conceptual system evolved to facilitate functions such as perception, categorization, inference, choice, and action, rather than communication. In LCCM theory, *conceptual structure* – the semantic representational substrate of the conceptual system – is modelled by the theoretical construct of the *cognitive model*. A cognitive model is a coherent body of multimodal knowledge grounded in the brain's modal systems. It derives from the full range of experience types processed by the brain including sensorimotor experience, proprioception, and subjective experience, including affect.

The conceptual content encoded as cognitive models can be re-activated during a process known as *simulation*: a general-purpose computation performed by the cognitive system to implement the range of activities subserving a fully functional conceptual system. Such activities include conceptualization, inferencing, choice, categorization, and the formation of *ad hoc* categories.[11]

In line with recent evidence in the cognitive science literature, LCCM theory assumes that language facilitates access to conceptual representations in order to prompt for simulations (Glenberg & Kaschak 2002, Kaschak & Glenberg 2000, Pulvermüller 2003, Vigliocco *et al*. 2009, Zwaan 2004; for a review, see Taylor & Zwaan 2009, Shapiro 2010; for nuanced views on the role of simulations, see Chatterjee 2010, Mandler 2010).

An important construct in LCCM theory – essential to an account of figurative language understanding, as I shall show below – is that of the *cognitive model profile*. Because an open-class lexical concept facilitates access to numerous association areas within the conceptual system, it facilitates access to numerous cognitive models, themselves connected to other cognitive models. The range of cognitive models to which a lexical concept facilitates direct or indirect access is its *cognitive model profile*.

Consider the cognitive model profile for the lexical concept I gloss as [FRANCE], associated with the form *France*. A partial cognitive model profile for [FRANCE] is represented in Figure 1.

Figure 1 attempts to capture the sort of knowledge language users must have access to when speaking and thinking about France. As it shows, the lexical concept [FRANCE] provides access to a potentially large number of cognitive models, each of which consists of a complex, structured body of knowledge that provides access to other sorts of knowledge. LCCM theory distinguishes cognitive models that are directly accessed via the lexical concept: *primary cognitive models*; from those cognitive models that form sub-structures of those directly accessed: *secondary cognitive models*. These secondary cognitive models are indirectly accessed via the lexical concept.

[11] For discussion and findings relating to the multimodal nature of conceptual representations and the role of simulation in drawing on such representations in facilitating conceptual function see, for instance, Barsalou (1999, 2008), Glenberg (1997), Gallese and Lakoff (2005), and references therein.

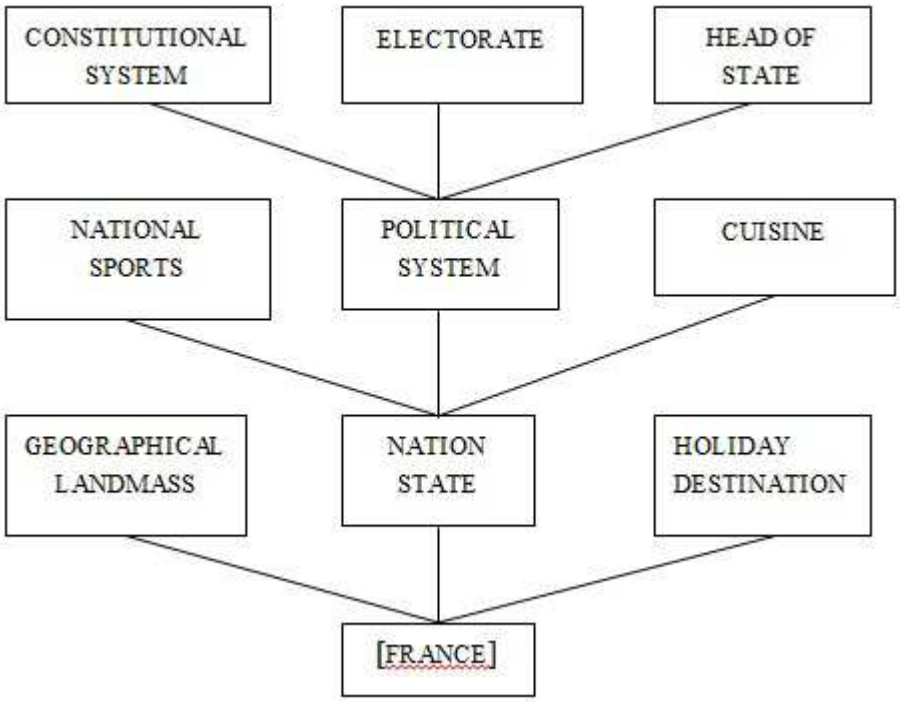

Figure 1: Partial cognitive model profile for [FRANCE].

The lexical concept [FRANCE] affords access to a number of primary cognitive models, which make up the *primary cognitive model profile* for [FRANCE]. These are hypothesized to include GEOGRAPHICAL LANDMASS, NATION STATE, and HOLIDAY DESTINATION. Each provides access to further cognitive models. Figure 1 gives a flavour of this by means of the secondary cognitive models accessed via NATION STATE: the *secondary cognitive model profile*. These include NATIONAL SPORTS, POLITICAL SYSTEM, and CUISINE, which are hypothesized to be further removed conceptually from the lexical concept [FRANCE]. For instance, one may know that, in France, the French engage in national sports of various types – football, rugby, athletics, and so forth – rather than others; the French do not typically engage in American football, ice hockey, cricket, and so forth. One may further know that, as a sporting nation, France takes part in international sports competitions including the FIFA football World Cup, the Six Nations rugby competition, the rugby World Cup, and the Olympics. One may have access to a large body of knowledge concerning the sorts of sports French people engage in. One may have knowledge of the funding structures and socioeconomic conditions and constraints that apply to these sports in France, France's international standing in these sports, and further knowledge about the sports themselves including their governing rules. This knowledge derives from a large number of sources, including direct experience and cultural transmission – including language.

Figure 1 gives a sample of further secondary cognitive models accessed via POLITICAL SYSTEM. Each secondary cognitive model has further cognitive models to which it provides access: (FRENCH) ELECTORATE is accessed via the cognitive model (FRENCH) POLITICAL SYSTEM, which is accessed via

the cognitive model NATION STATE. NATION STATE is a primary cognitive model; ELECTORATE and POLITICAL SYSTEM are secondary cognitive models. [12]

LCCM theory is motivated in large part by the observation that word meanings vary across contexts of use in terms of the conceptualization(s) that they in part give rise to. Consider the following examples relating to the lexical form *France*:

(22) a. France is a country of outstanding natural beauty.
b. France is one of the leading nations in the European Union.

In (22a), *France* relates to a geographical landmass coincident with the borders of mainland France. In (22b), *France* relates to a political nation state, encompassing its political infrastructure. The essential insight of LCCM theory is that linguistic – and, indeed, extra-linguistic – context guides the way the lexical concept [FRANCE] activates the relevant cognitive model in the cognitive model profile to which [FRANCE] facilitates access. While the details of how this is achieved are beyond the scope of this paper (see Evans 2009b for details), the idea is as follows. In (22a) the linguistic context activates the LANDMASS cognitive model accessed via [FRANCE]. In (22b), the linguistic context activates the NATION STATE cognitive model accessed via [FRANCE]. Context constrains which part of the cognitive model profile a given lexical concept facilitates access to. This allows one to model the protean nature of word meaning.

4.2 Literal versus figurative conceptions[13]

As I have just shown, the way open-class words such as *France* derive their interpretation involves activation of a particular component – a cognitive model – in a given cognitive model profile. For activation to occur, the cognitive model profile accessed via the open-class lexical concepts in an expression must undergo a process LCCM theory refers to as *matching*. According to LCCM theory, a failure to match across two or more primary cognitive model profiles is one of the hallmarks of figurative language.

The distinction between what I refer to as a *literal conception* – the meaning associated with a literal utterance – and a *figurative conception* – the meaning associated with a figurative utterance – relates to that part of a word's *semantic potential* – which, according to LCCM theory, relates to its cognitive model profile *(cf.* Allwood 2003) activated in the process of constructing a conception. A literal conception canonically results in an interpretation that activates a cognitive model or models within the primary – which is to say default – cognitive model profile. A figurative conception occurs

[12] The hierarchical organization of cognitive model profiles results from the empirical finding that knowledge is organized, and certain knowledge types appear to exhibit typicality effects: some types of knowledge appear to be more central and others more peripheral to particular lexical concepts. See (Evans 2009b) for discussion.
[13] I make no distinction here between types of figurative conception: e.g., metaphor versus metonymy; these lie beyond the scope of the present paper. For such a distinction, see (Evans 2010b).

when a clash arises in the primary cognitive model profiles subject to matching. This is resolved when one of the cognitive model profiles achieves a match in its secondary cognitive model profile.

Consider the following examples, again relating to the lexical concept [FRANCE]:

Literal conception

(23) France has a beautiful landscape.

Figurative conception

(24) France rejected the EU constitution.

In (23), a literal conception arises by virtue of a match between the interpretation of the expression *beautiful landscape* – the result of a prior match between [BEAUTIFUL] and [LANDSCAPE] – and the primary cognitive model profile to which [FRANCE] affords access, these being the only expressions that facilitate access to cognitive model profiles. That is to say, the resulting interpretation of [BEAUTIFUL] and [LANDSCAPE] undergoes matching with the cognitive model profile to which the lexical concept [FRANCE] affords access: a search takes place in the primary cognitive model profile associated with [FRANCE]. Constrained by principles that ensure conceptual and schematic coherence (Evans 2009b), a match is achieved in the primary cognitive model profile of [FRANCE].

In (23), the GEOGRAPHICAL LANDMASS cognitive model for [FRANCE] is activated – recall the cognitive model profile for [FRANCE] presented in Figure 1. It is this cognitive model that matches the interpretation associated with the expression *beautiful landscape*. The conception that arises for (23) is literal, because activation occurs solely in the primary cognitive model profile of [FRANCE].

In contrast, (24) would usually be judged to be figurative in nature. *France* in (23) refers to a specific geographical region: that identified by the term *France*. *France* in (24) refers to the electoral majority who voted against implementing the EU constitution in a 2005 referendum. This figurative conception arises due to a clash between the primary cognitive model profile of [FRANCE] and the interpretation associated with the expression *rejected the EU constitution*. None of the primary cognitive models to which [FRANCE] facilitates access can be matched with that interpretation.

The failure of matching in the primary cognitive model profile requires establishing a wider *search domain*: namely, matching in the secondary cognitive model with cognitive models to which the lexical concept [FRANCE] provides only indirect access. This enables resolution by facilitating a search region beyond the default one: which is to say, the primary cognitive model profile.

In (24), a secondary cognitive model is identified that achieves conceptual coherence, thereby resolving the clash and achieving a match. The cognitive model that achieves activation is the ELECTORATE one (see Figure 1). The matching process results in a figurative interpretation for [FRANCE], which is that of 'electoral majority'. Because the ELECTORATE cognitive model is a secondary cognitive model, this means that the conception is figurative.

The defining feature of a literal conception is that matching occurs in the primary cognitive model profiles of the relevant lexical concepts. The defining feature of a figurative conception is a

clash in those primary cognitive model profiles, necessitating resolution and, hence, activation of cognitive models in the secondary cognitive model profile of one or more of the relevant lexical concepts; for full details, see (Evans 2010b).

4.3 Conceptual metaphors versus semantic affordances

LCCM theory assumes that figurative meaning construction involves a number of different knowledge types. One knowledge type involves primary conceptual metaphors (Grady 1997b, Lakoff & Johnson 1999). Recall that these are hypothesized to be cross-domain conceptual primitives that arise automatically on the basis of pre-conceptual, universally shared experience types. A second knowledge type involves compound metaphors (Grady 1997b, 2005; Lakoff & Johnson 1999 prefer the term *complex metaphor*). These are complex bodies of knowledge arising through processes of conceptual integration, in the sense of Fauconnier and Turner: i.e., they are a type of (often very complex) blend. Specific proposals as to how they arise can be found in (Grady 1997b, 2005; Fauconnier & Turner 2008).

The common denominator of primary and compound metaphors is that they involve knowledge recruited from other regions of conceptual space: which is to say, from other domains of experience. LCCM theory assumes that primary and compound metaphors structure the cognitive models that make up a lexical concept's cognitive model profile, as I shall show below. On the present account, conceptual metaphors – whether primary or compound – form part of the knowledge to which an open-class lexical concept facilitates access and, hence, part of the conventional body of knowledge potentially invoked by any given lexical item during the process of figurative language understanding.

In addition to knowledge of this type, lexical concepts facilitate what I refer to as *semantic affordances*: those knowledge types that are immanent in the cognitive model profile prior to additional structuring via conceptual metaphor. For instance, the lexical concept associated with the form *whizz* provides a number of possible interpretations that arise purely on the basis of the cognitive models to which it facilitates direct (primary cognitive models) and indirect access (secondary cognitive models); these inferences constitute semantic affordances. Semantic affordances are activated during the process of (figurative) language understanding, as mediated by context. Semantic affordances potentially activated by selection of the lexical concept [WHIZZ] include 'rapid motion', 'a distinct audible sound', 'lack of perceptual detail associated with the object of motion', and 'limited durational elapse to observe object of motion', as well as many others. I argue below that semantic affordances – as well as relational structure recruited via conceptual metaphor – is important in giving rise to the interpretation associated with any given open-class lexical concept during figurative language understanding.

I make four claims as to the roles of conceptual metaphors and semantic affordances in figurative meaning construction.

Claim 1: as argued in Section 3.1, there are compelling reasons for thinking that conceptual metaphors, while part of the story, underdetermine figurative language as it shows up in language use. For instance, the conceptual metaphor STATES ARE LOCATIONS does not predict why there are different patterns in the sorts of states that can be encoded by different prepositions in English:

(25) a. She is in love (*cf.* *she is on love).
b. The soldiers are on red alert (*cf.* *the soldiers are in red alert).

Claim 2: a semantic affordance is an inference specific to a given lexical concept. It arises during figurative – and, indeed, non-figurative – language understanding due to activation of (part of) a cognitive model to which the lexical concept facilitates access: in other words, semantic affordances reside in the conceptual system and, hence, are non-linguistic in nature, although they are activated by linguistic (as well as non-linguistic) context. In principle, a lexical concept can facilitate activation of a vast number of semantic affordances, constrained only by the cognitive model profile to which it facilitates access. Moreover, a lexical concept can, in any utterance, give rise to more than one semantic affordance: a consequence of the extra-linguistic context – venue, time, interlocutors, and so forth – linguistic context, and processes of meaning construction that apply. Consider the following utterances:

(26) a. Christmas is approaching.
b. Christmas whizzed by (this year).

CMT claims (e.g., Lakoff & Johnson 1999, Moore 2006) that the ego-centred conceptual metaphors for Moving Time allow one to understand (the passage of) time in terms of the motion of objects thorough space, thereby licensing these examples.

While examples such as these are, no doubt, in part a consequence of conceptual metaphors for time (here, in terms of their 'location' in time: either future (26a) or past (26b)), the forms *approaching* and *whizz* give rise to distinct semantic affordances that cannot be predicted solely on the basis of the common conceptual metaphor meant in CMT to license them. The semantic affordance associated with the lexical concept [APPROACHING] relates to 'relative imminence'. The event in question – in (26a), Christmas – is construed as imminent. The semantic affordance associated with [WHIZZ] in (26b) does *not* concern imminence, but the observer's compressed experience of the event (again, Christmas): i.e., the semantic affordance relates to the phenomenological experience that, in (26b), Christmas felt as if it lasted lesser time than is normally the case. Even while the Moving Time conceptual metaphor allows the language user to apply relational structure from her experience of objects moving in space and so interpret Christmas metaphorically as an object, part of her interpretation involves semantic affordances unique to the relevant lexical concepts for motion. Because the aforementioned inferences are specific to lexical forms, it is theoretically more accurate to assume that this aspect of meaning construction involves a bottom-up process whereby the inferences

arise due to activation of knowledge – semantic affordances – specific to the lexical concepts in question, rather than from a top-down process of overarching conceptual metaphor.

Claim 3: conceptual metaphors and semantic affordances provide two, complementary knowledge types essential to figurative language meaning construction. LCCM theory assumes that language use – specifically, figurative conceptions – draws on a number of different knowledge types. These include purely linguistic as well as conceptual knowledge. The semantic dimension of linguistic knowledge is modelled in terms of the theoretical construct of the lexical concept, which constitutes a bundle of different knowledge types (see Evans 2009b for full details). Conceptual knowledge takes different forms, including – at the very least – primary cognitive models; secondary cognitive models; and conceptual metaphors, which structure primary cognitive models in terms of structure recruited from other domains. Because LCCM theory takes a usage-based perspective, I assume that any utterance, in producing a conception, invokes various knowledge types – including context of use.

Claim 4: in LCCM theory, conceptual metaphors hold at the level of cognitive models. They structure the primary cognitive model(s) to which an open-class lexical concept facilitates access. This means that the cognitive model profile for a lexical concept such as [CHRISTMAS] has enhanced conceptual structure, potentially facilitating access to relational knowledge about the motion of objects through space. This allows language users to invoke inferences, associated with objects in motion, to understand temporal relations involving the relative 'location' in time of a temporal event (here, Christmas). The next section describes how this might work in practice.

4.4 Interaction between conceptual metaphors and semantic affordances in figurative meaning construction

In this section, I argue that linguistically mediated figurative meaning often arises due to interaction between conceptual metaphors and semantic affordances. Consider these examples:

(27) a. Christmas is approaching (us).
b. Christmas whizzed by this year.

CMT claims that these sentences are motivated by the conceptual metaphor TIME IS OBJECTS IN MOTION (ALONG A PATH): *aka* the Moving Time metaphor. However, while this is, presumably, part of the story – allowing one to conceptualize a temporal event, Christmas, in terms of inferential structure associated with objects and relative locations on a path in terms of temporal notions of past, present, and future – it is not the whole story, and cannot be for the following reason.

While (27a) implies the relative imminence of a temporal event, Christmas, no such inference is provided by (27b) – which, instead, implies that the temporal event was perceived as having a relatively shorter duration than usual: the phenomenon of temporal compression (see Evans 2004, 2009b: Chapter 15). These inferences are independent of the Moving Time conceptual metaphor.

They must be, because these inferences arise when [APPROACHING] and [WHIZZ (BY)] are deployed in veridically spatial rather than temporal scenarios:

(28) a. The woman is approaching.
b. The car whizzed by.

The inference in (28a) is that the woman's arrival is imminent. Analogously, (28b) provides the inference that the perceptual awareness of the car was experienced for a relatively short time. These semantic affordances arise automatically as a consequence of the cognitive model profile to which the lexical concepts [APPROACHING] and [WHIZZ] facilitate access. They combine with the Moving Time metaphor in (27a) and (27b) to give rise to figurative meaning. Below, I sketch how the Moving Time conceptual metaphor is accessed by the [CHRISTMAS] lexical concept to construct a figurative conception of (27a).

The lexical concept [CHRISTMAS] facilitates access to a number of primary cognitive models, as Figure 2 illustrates. One knowledge type relates to Christmas as a CULTURAL FESTIVAL that includes the exchange of gifts among other cultural practices. Another relates to Christmas as a TEMPORAL EVENT, which includes a whole host of knowledge associated with the TEMPORAL EVENT cognitive model (see Evans 2009b for detailed discussion). Part of one's knowledge about temporal events is that they can be situated in PAST, PRESENT, or FUTURE. Another part is its DURATION, which has a number of values associated with it. Moving from right to left, the first is TEMPORAL COMPRESSION: the overestimation of time, which is to say the experience that time is proceeding more quickly than usual. The second is SYNCHRONOUS DURATION: the normative estimation of time, which is to say the experience of time unfolding at its cultural and phenomenologically standard or equable rate. The third is PROTRACTED DURATION: underestimation of duration, which is to say the experience that time is proceeding more slowly than usual. The final primary cognitive model in Figure 2 is Christmas as a RELIGIOUS FESTIVAL. This relates to knowledge about the nature of Christmas as a Christian event and the way the festival is enacted and celebrated.

The primary cognitive models for [CHRISTMAS] recruit structure from other cognitive models via conceptual metaphor. As LCCM theory operationalizes, a conceptual metaphor provides a stable link allowing aspects of conceptual content, encoded by one cognitive model, to be imported to form part of the permanent knowledge representation encoded by another.

For instance, the primary cognitive model TEMPORAL EVENT is structured via conceptual metaphor in terms of a stable, long-term link between it and the cognitive model relating to an OBJECT IN MOTION ALONG A PATH. That cognitive model – represented in Figure 2 as a circle along a path, with the arrow indicating direction of motion – provides the TEMPORAL EVENT cognitive model with relational structure concerning knowledge of objects undergoing motion along a path. The conceptual content recruited via conceptual metaphor is indicated by the dashed lines.

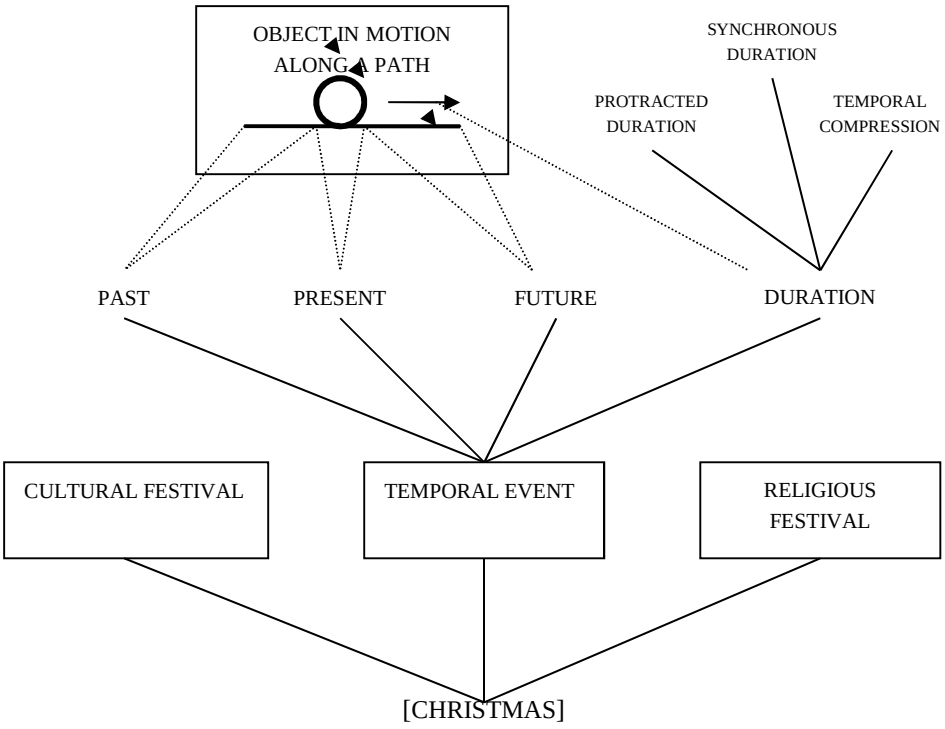

Figure 2: Partial primary cognitive model profile for [CHRISTMAS].

Relational structure from this cognitive model is inherited by the PAST, PRESENT, and FUTURE attributes, such that content, relating to the region of the path behind the object, serves in part to structure one's experience of 'pastness'; content, relating to the object's present location, serves in part to structure one's experience of the present; and content, relating to that portion of the path in front of the object, serves to structure one's experience of the future. This is indicated by the dashed lines, which map the relevant portions of the path of motion from the OBJECT IN MOTION ALONG A PATH cognitive model onto the attributes FUTURE, PRESENT, and PAST. Content relating to the nature of motion is inherited by the DURATION attribute. This is captured by another dashed line, which links the arrow – signifying motion – with the DURATION attribute.

It is now possible to see how a sentence such as (27a) is understood to relate to a temporal event (Christmas) 'located' in the future. This inference arises due to matching between the primary cognitive model of [CHRISTMAS] – involving spatial content recruited via conceptual metaphor – and the primary cognitive model profile accessed via [APPROACHING]. See Figure 3. The conceptual metaphor structures the primary cognitive model TEMPORAL EVENT, providing it with relational structure recruited from a cognitive relation to motion through space.

In this case, matching is achieved in the primary cognitive model profiles of both [CHRISTMAS] and [APPROACHING]. Through conceptual metaphor, [CHRISTMAS] facilitates access to relational structure derived from the scenario of an object in motion: knowledge that forms part of the TEMPORAL EVENT cognitive model. This is matched with the kind of terminal motion accessed via

[APPROACHING]. The cognitive model profile associated with [APPROACHING] involves motion towards an entity: the object in motion is in front of the entity it is 'approaching'. Because the FUTURE attribute of the TEMPORAL EVENT cognitive model accessed via [CHRISTMAS] is structured in terms of that part of the motion trajectory that is in front, there is a match. That match involves interpreting the temporal event of Christmas as 'located' in the future. This interpretation is a consequence of a special type of matching I refer to as *conceptual metaphor matching*.

LCCM theory assumes that, in cases of conceptual metaphor matching, regular matching still takes place. In other words, conceptual metaphor matching involving primary cognitive models does not prohibit additional figurative semantic affordances arising via activation in the secondary cognitive profile of one of the lexical concepts undergoing matching and clash resolution.

The second issue to account for in (27a) concerns the inference that the temporal event of Christmas is relatively imminent. I argue that this interpretation arises due to additional matching in the secondary cognitive model profile of [APPROACHING]. Again, just because conceptual metaphor matching has occurred does not preclude further matching. This secondary process attempts to construct an interpretation for [CHRISTMAS] and [APPROACHING] by first searching the primary cognitive models of both these open-class lexical concepts. Christmas is a temporal, cultural, and religious event, and hence something that cannot undergo the sort of veridical motion implicated by the primary cognitive model profile associated with [APPROACHING]. A clash arises, necessitating resolution[14] via a search in the secondary cognitive model profile of [APPROACHING].

Figure 3 provides a very partial cognitive model for [APPROACHING], including primary cognitive models for TARGET LOCATION, DIRECTED MOTION OF AN ENTITY, and THE IMMINENCE OF ARRIVAL OF AN ENTITY. A consequence of the latter is IMMINENCE OF OCCURRENCE OF EVENT: a secondary cognitive model. A temporal event such as Christmas can occur but not (literally) arrive, so there is a match between the secondary cognitive model IMMINENCE OF OCCURRENCE OF EVENT and the primary cognitive model profile of [CHRISTMAS]. The interpretation of the imminence of the occurrence of Christmas is due to a semantic affordance arising from clash resolution following regular matching.

This analysis reveals that interpretation of (27a) involves more than simply conceptual metaphor. A number of different knowledge types are involved; regular processes of meaning construction take place, as modelled by LCCM theory. This involves understanding the temporal event as an object that can undergo motion – via conceptual metaphor – and, hence, be 'located' in the future. It further requires understanding – through clash resolution – that the type of motion implicates the relative imminence of occurrence. This is achieved without recourse to conceptual metaphor, via semantic affordance.

[14] For details of when clash resolution arises and other factors that bear on figurative meaning construction, see (Evans 2010b).

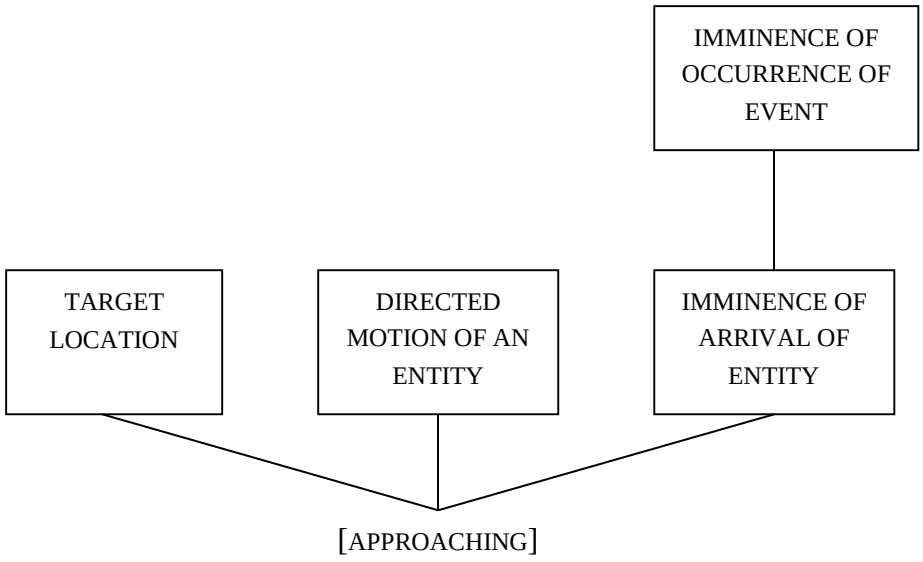

Figure 3: Partial cognitive model profile for [APPROACHING].

5. CONCLUSION

In this paper, I have argued that, while it is an important theoretical construct, conceptual metaphor is but one type of knowledge unit playing a role in figurative meaning construction. In particular, I have argued that, while conceptual metaphors inhere in the conceptual system, a class of metaphors – discourse metaphors – emerge and evolve in and through language use; they inhere in the linguistic system. I refer to the semantic units associated with words and other linguistic expressions as lexical concepts. I introduce LCCM theory and suggest that lexical concepts provide access to non-linguistic knowledge representations – cognitive models – that can be structured in terms of conceptual metaphor. The integration of lexical concepts in figurative meaning construction gives rise to the integration of conceptual metaphor with other types of conceptual knowledge: most notably, semantic affordances. The combination of these two types of knowledge representation facilitates the figurative meaning construction in the examples I have considered, rather than conceptual metaphor alone. This perspective promises to build towards a joined-up account of figurative meaning construction.

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Integral Semantics and Conceptual Metaphor: Rethinking Conceptual Metaphor Within an Integral Semantics Framework

The paper focuses, on the one hand, on two theoretical problems of Conceptual Metaphor Theory: namely, the cognitive status and the creative dimension of the conceptual metaphors; on the other, it aims at approaching some descriptive findings from Conceptual Metaphor Theory within the perspective of Coseriu's semantics. Over the past years, the universalist claim of pre-linguistic embodiment via image schemas has been subject to much criticism. Recent attempts to simply situate conceptual metaphors within a social and cultural context did not bring the expected results. Therefore, the need for a radical breakthrough from the old conceptual and theoretical framework of Lakoff and Johnson's Conceptual Metaphor Theory became urgent. The reconstruction of cognitive science on phenomenological and hermeneutical bases is on the way to being pursued within the rising of the third generation of cognitive science. It will certainly represent a major advance for bridging the gap between cognitive science and other traditions of research, such as integral semantics.

Keywords: conceptual metaphor, image schema, embodiment, creativity, intersubjectivity, linguistic sign, (symbolic) representation, metaphorical meaning, meaning proper, designation, knowledge of things, context of culture.

1. AN ATTEMPT TO BRIDGE THE GAP BETWEEN COGNITIVE SEMANTICS AND INTEGRAL LINGUISTICS

This paper aims to demonstrate, on the one hand, how Integral Semantics (IS) can help Cognitive Semantics (CS) solve some conflicting positions regarding Conceptual Metaphor Theory (CMT); and, on the other, to show how both can turn their most important findings into solid accomplishment. My quest for integrating these theories will mainly be pursued within the field of restructuring work done by *the third generation of cognitive science*.[1] How can these theories be brought together? IS seems to

[1] It is well known that the demarcation between generations of cognitive science varies, to some degree, between authors, relative to the criteria used for judging the unity of the field within the cognitive science paradigm. My understanding is more sympathetic to Zlatev's (2007, 2008a) and Sonesson's (2009) position than to Thompson's (2007). I refer to *the third generation of cognitive science* as the relatively recent research drive that attempts systematically to reconstruct and rethink the theoretical and conceptual foundations of cognitive science on the strength of concepts such as *subjectivity, intersubjectivity, consciousness,* and *linguistic sign*. Although the first signs of a new generation of cognitive science came from works developed in relative isolation, recently a few scholars have unified their efforts and consolidated a distinct perspective called

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provide the broadest conceptual and theoretical framework for a comprehensive, coherent, integrational matrix of the current directions in linguistics (see e.g. Zlatev 2011). CMT can find its specific place within IS: namely, at *the universal level of speaking* in Coseriu's matrix (see below). At the same time, IS can, within its overall perspective, value several discoveries from CS in the field of 'metaphorology'.

Points of view				
Levels of language	**Activity** *Enérgeia*	**Knowledge** *Dynamis*	**Product** *Ergon*	**Content**
Universal	Speaking in general	Elocutional knowledge	Totality of utterances	Designation
Historical	Concrete particular language	Idiomatic knowledge	(Abstracted particular language)	Meaning
Individual	Discourse	Expressive knowledge	Text	Sense

Table 1: Coseriu's matrix, adapted from Coseriu (1985).

There are at least three main points at which the two, seemingly incompatible, frameworks – CS and IS – can be brought together. (1) Both CS and IS place metaphor in the *genus proximum* of human creative-imaginative activities. (2) Both types of semantics view metaphor as a cognitive category of thinking and – with some qualifications – human language. (3) Both understand metaphorical knowledge as knowledge based on images.

Apart from such convergences, the solutions offered by these approaches could not seem more different – even though they start from a common, broad sense in which metaphor can be seen as the creation of new imagistic semantic contents in everyday speaking, one of the usual means of speaking by relating to things, events, or aspects of one's experience. However, unlike Coseriu who – as early as 1952 (1985 [1952]; see also Borcilă, 2003) – situated 'metaphorical creation' in an enlarged sense within the *cognitive medium of language*, CS views metaphor as a phenomenon that creates new cognitive contents, or *conceptual domains* of *thought*, within the framework of mental spaces that are prior to, and independent of, language function.[2] Any attempt to bridge the gap between these different 'cognitive' perspectives necessarily involves a more basic consideration at the level of the conceptual backgrounds of the theories under consideration.

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cognitive semiotics (see Zlatev 2012). This perspective integrates results from cognitive science and semiotics to create an adequate framework for the human and social sciences (see Sonesson 2009). The third-generation systematic reconstruction of cognitive science has opened the path to a promising dialogue between integral and cognitive linguistics by its systematic examination of the core concept of intersubjectivity, involved in both the intersubjective constitution of the world and the emergence of shared linguistic meanings (see Zlatev, Racine, Sinha & Itkonen 2008, where this concept is approached from several perspectives).

[2] The crucial difference is connected with a larger, more fundamental quarrel regarding the role attributed to the 'language faculty' in the constitution and functioning of the human mind. Coseriu's conception is obviously based on a Humboldtian platform, according to which language – in its essence – is not simply instrumental but *constitutive* of human mind and consciousness.

2. THE CONCEPTUAL METAPHOR MODEL IN COGNITIVE SEMANTICS

2.1 Lakovian theory and its critiques

The new conceptualization of metaphor proposed by Lakoff and Johnson (2003 [1980], 1999) is built on the idea that metaphors are not linguistic expressions or 'figurative elements of speech' but rather conceptual structures – *conceptual metaphors*[3] – that can be identified at a level prior to their manifestation in language. Furthermore, it is claimed that conceptual metaphors have a decisive role in structuring and defining one's ordinary conceptual system. Metaphorical expressions such as *we are* **close** *friends* or *we've been* **close** *for years, but we've beginning to* **drift apart** are considered surface manifestations of a single conceptual metaphor: INTIMACY IS CLOSENESS.

Lakoff and Johnson understand metaphor as a layer of conceptual content, whose function is to produce 'new understandings [of things] and … new realities' (Lakoff & Johnson 2003 [1980]: 235). As far as the functional principle of these conceptual metaphors is concerned, the new metaphorical content is produced by mapping or 'projecting' an image-schematic structure of experiential content from a source domain onto a target domain. The connection of the two conceptual domains is not arbitrary. It does not occur in the absence of, or separately from, the contents of pre- or extra-linguistic experience but is motivated by the metaphorical elaboration of image-schematic pre-conceptual structures.

Enthusiastically welcomed by many researchers in the field – while subsequently subject to criticism (see e.g. Rakova 2002, Haser 2005) – CMT[4] filled a gap that was profoundly felt in traditional metaphorology, dealing with the way structures of experience participate in the production and understanding of metaphorical speaking: i.e., in the creation of *designative* metaphorical contents.

More than three decades since its original formulation, as a result of much empirical research the theory has undergone numerous adjustments, which have led to increasing refinement of its conceptual apparatus. In spite of the undeniable descriptive avenues opened by CMT, theoretical problems relating to both the status of metaphors and the cognitive aspect of the theory proved to be insufficiently explored and questioned. It is safe to say that the fate of this model of conceptual metaphor largely depends on solving these theoretical problems (Borcilă 1997; see also Faur *forthcoming*).

The belief that metaphor is a conceptual mental phenomenon prior to, and independent from, the metaphorical expression as such is shared by nearly all cognitive semanticists. From this perspective, 'metaphorical speaking'[5] is nothing but an epiphenomenon in relation to metaphorical *thought*: a

[3] *Metaphoric concepts* in the first formulation of the theory (Lakoff & Johnson 1980).

[4] Since 1980, CMT has passed through several versions due to its difficulties solving the problem of the creation of new metaphorical contents. For the different versions of CMT, see Section 3.3.

[5] Lakoff and Johnson (2003 [1980]) do not refer to the traditional linguistic distinctions between *language* (faculty and activity), *langue* (linguistic system), and *speech* (individual utterances). Lakoff and Johnson's distinction between metaphorical *thought* and metaphorical *speaking* principally serves to demonstrate that metaphor is not confined to language (and, within this realm, is not a matter of stylistic flourish) but is

'surface manifestation'. The immediate consequence of postulating such a conceptual level is, as A. Barcelona notes (2000: 2), that the 'faculty of language' becomes a mere 'reflection' or 'specialization' of 'general cognitive abilities'. Cuenca and Hilferty (1999) consider the denial of language's functional autonomy a 'fundamental principle' of cognitive linguistics (CL), according to which 'language is not an autonomous faculty' but subordinate to – or at least integrated with – the other 'human cognitive abilities' (Cuenca & Hilferty 1999: 181).[6] Borcilă (2003) argues that the separation of the two levels in CL – the conceptual and the linguistic – and especially the reduction of language to the level of 'expression' and the failure to acknowledge the primordial *cognitive function* of language undermine the project's goal from the very beginning: the goal of explaining the creation of new metaphorical contents in everyday speaking.

Few studies have tackled head on the problematic aspects that arise when surgically separating the conceptual and linguistic levels of metaphor. Haser (2005) has been one of the most outspoken critics of the conceptual metaphor model. She noticed how, when explaining conceptual metaphors, the starting point for cognitive semanticists is always metaphorical *speaking*. Naturally, with this in mind, she wondered if metaphoric concepts determine the emergence of linguistic expressions or vice versa. The alleged primacy of conceptual metaphor in relation to metaphorical speaking conflicts with the observation that the model cannot demonstrate the presence of conceptual metaphor in the absence of metaphorical *linguistic expressions* in which conceptual metaphor is supposed to be crystallized. This causes Haser (2005: 147) to question the legitimacy of the jump from thought to language – or vice versa, from language back to thought. However, with no intention to minimize the significance of her work, I believe she does not solve the problem in a satisfactory manner. On a closer look, it is unclear how connections between the conceptual and linguistic levels can be established without providing a different operational framework.

2.2 The sociocultural situatedness of conceptual metaphors

Ever since the first formulation of Lakoff and Johnson's CMT within *experientialist semantics* (Lakoff & Johnson 1980) and afterwards within *embodiment theory* (Lakoff & Johnson 1999), it has been claimed that metaphorical thinking makes use of recurrent schematic-imagistic patterns of one's embodied experience. More precisely, proponents of CMT argue that one's capacity for conceptual metaphor is linked to one's embodied, *pre-verbal* experience, based on the mapping of 'experiential structure from the "imagistic" realm of sensory-motor experiences to non-imagistic ("abstract") ones' (Hampe 2005: 2). For example, the embodied experience of containment is central to understanding both linguistic expressions such as *your argument doesn't have much* **content** or *your argument is* **vacuous** and the underlying conceptual metaphor AN ARGUMENT IS A CONTAINER. In addition,

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cognitively important. Yet their distinction between the two levels, of thought and language, is, to some extent, analogous to Saussure's distinction between *langue* and *parole* (speech) (see Section 3.3).

[6] 'El lenguaje no es una facultad autónoma, sino que se relaciona con los otras habilidades cognitivas humanas'.

Lakoff and Johnson claim that experience is 'never merely a matter of having a body of a certain sort; rather, every experience takes place within a vast background of cultural presuppositions': i.e., 'all experience is cultural through and through…, we experience our "world" in such a way that our culture is already present in the very experience itself' (Lakoff & Johnson 2003 [1980]: 57). However, in both Lakoff and Johnson's experientialist semantics and their embodiment theory, it remained a highly controversial issue[7] how universal pre-linguistic embodiment via image-schemas[8] could account for *sociocultural embeddedness.*[9]. Recently, the claim for the universalism of conceptual metaphor has been debated within the context of an increasingly amount of research. Over the past few years, researchers have argued for the need to link the body to culture and described the sociocultural situatedness of image-schemas: that is, the embodiment that grounds conceptual metaphor (Gibbs 1999; Kimmel 2005, 2008; Yu 2008a, 2008b; Violi 2008; Zinken, Hellsten & Nerlich 2008).

Within a psychological framework, Gibbs (1999) criticizes the cognitive linguists' and cognitive psychologists' view of metaphor as the conceptual structure of thought, warning against the solipsism imminent in their theory. Using an appropriate metaphor, Gibbs summons cognitive scientists 'to move' metaphor 'out of our heads' 'into the embodied and public world'. He stresses the cultural dimension of cognition, arguing that image schemas are not universal patterns but rather have a strong cultural component. He offers illuminating examples showing that culture is not something *added* to the physical interaction of body with world[10]; rather experience itself is culturally constituted. He proposes a perspective on embodied metaphors as shared representations, within a cultural community, that play a pivotal role in both language and thought. The far-reaching, fundamental principle Gibbs brings forward is 'that cognition arises, and it is continually re-experienced, when the body interacts with the *cultural world*' (Gibbs 1999: 162; *emphasis added*).

In the same vein as Gibbs, Yu (2008a; 2008b) demonstrates that, if the body is 'a potential universal source domain for metaphorical mappings from bodily experiences onto more abstract and subjective domains' (Yu 2008b: 250), then cultural models constitute the *filter* of bodily experience,

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[7] The concept of *image schema* as well as the meta-theoretical concept of *embodiment* have been subject to much critique, because they lack the very characteristics that would prove their phenomenological character: intersubjectivity, accessibility to consciousness, and the possibility to be linked to language (Zlatev 2007). The issues have been discussed within two recent volumes: (Haser 2005) and (Ziemke, Zlatev & Frank 2007). Perhaps the most vehement critiques of Lakoff and Johnson's concepts are raised from within the third generation of cognitive science: see (Zlatev 2005, 2007, 2008a, 2010, 2011; Itkonen 2006, 2008; Sonesson 2007, 2009).

[8] Both *image schema* and *embodiment* are ambiguous concepts in the cognitive science literature: one cannot find a unified notion of either one.

[9] The term *sociocultural situatedness* (or *sociocultural embeddedness*) makes reference to the work of a group of cognitive researchers who criticize Lakoff and Johnson's notion of embodiment as isolated from any interaction with social and cultural context. The concept 'denotes the way(s) in which individual minds and cognitive processes are shaped by their being together with other embodied minds, i.e., their interaction with social and cultural structures, such as other agents, artefacts, conventions, etc., and more particularly…, with language itself' (Frank 2008: 1).

[10] Otherwise, such interaction *would* give rise to universal patterns of thinking and reasoning.

setting up perspectives from which each experience is viewed. Yu (2008b) analyzes the complex metaphors DIGNITY IS FACE and PRESTIGE IS FACE in Chinese to show how the bodily basis of the 'image' can motivate a metaphor, but the 'actual selection' of it largely depends on its cultural basis. Moreover, he proves that 'culture serves as a filter that only allows certain bodily experiences to pass through so that they can be mapped onto certain target-domain concepts' (Yu 2008b: 249).

Kimmel (2005) raises a much stronger critique of the universality claim for image schemas 'as the grounding of metaphoric mappings in primary scenes'. He argues that cognitive semanticists' 'ontology and… methodology of image schema research remains grounded in mutually strengthening biases which are not exactly congenial with a socio-cultural view' (Kimmel 2005: 288). On the one hand, this happens because image schemas – due to their supposed universal pre-linguistic embodiment – are understood as 'developmental universals'. On the other hand, since 'embodiment is rooted in the kinaesthetic experiences in space', there is no place for culture to shape the body – only the opposite (Kimmel 2005: 288). Kimmel demonstrates that, from the perspective of image schema acquisition, it is necessary to take into account the dialectical relationship between body and culture. In his account, image schemas are not universal patterns: they are 'learned' and permanently 'refined' in 'culturally recurrent settings'. He redefines image schemas as 'tools for situated cognition and action' (Kimmel 2005: 305). In response to Johnson's understanding of image schemas, Kimmel proposes a 'balanced view'. He demonstrates 'how discourse, ritual, and material culture shape image schemas', and he tries to overcome the 'tendency to unidirectionally theorize how image schemas shape discourse' (Kimmel 2005: 299). As a direct consequence for this paper, his sociocultural perspective opens a horizon in which language begins to regain its proper place in human cognition. He insists that 'we need to develop frameworks… that capture how image-schematic metaphors, for example, are doubly constrained by embodied experiences *and* by cultural ideology' (Kimmel 2005: 299; *emphasis original*).

Although all these researchers signalled the urgent need to re-evaluate concepts at the heart of Lakoff and Johnson's CMT, they were yet not been prepared for a radical change in the conceptual and theoretical framework. However, it became clear that progress toward a radical breakthrough could not be achieved through the extension or relaxation of the core concepts of embodiment theory (Borcilă *forthcoming*). The major reason behind this failure was the lack of systematically developed notions of subjectivity, intersubjectivity, consciousness, and – especially – linguistic sign. Too, there was no *coherent framework* able to explain the formative role of language and culture in shaping the body or the dialectic relationship between culture and body. I think that such a systematic interdisciplinary framework is emerging in the process of the conceptual reconstruction of cognitive science proposed by the third generation (see Section 2.1).

Basing his work on the new conceptual framework and its achievements, Zlatev characterizes the world[11] in which human beings are embedded as the *universe of discourse*[12] and the embodiment[13] at

[11] In his theory of embodiment of meaning, Zlatev (2009b) distinguishes four worlds according to four kinds of embodiment, the subject involved in each world, and the subject's internal value system.

this level as *extended embodiment* (2009a, 2009b). This world consists of 'cultural beliefs, myths, scientific theories, political ideologies, novels, poems, internet forums, blogs etc. which are made possible by language' (Zlatev 2009b: 19). The universe of discourse is extended to include the inferior levels and is largely based on language and culture; but these, in turn, are based on the consciousness of the *lived body*, and ultimately in *autopoiesis* of the living. Zlatev systematically pleads for a *sociocultural perspective* on embodiment, built on phenomenological and hermeneutic bases. He acknowledges the linking of 'the bodily experience to the wider world of culture' (Zlatev 2009b: 155), pointing out the important role of language in grounding culture and the way culture, in turn, shapes the body. In my view, this acknowledgement of the functional autonomy of language and its role in human cognition represents a major advance in relation to the previous generation.

2.3 Some remarks on the first conceptual level (the source domain) for metaphor

One of the basic assumptions of CMT is the principle of image-schema projection, from the pre-conceptual level onto the conceptual level and within the conceptual level itself: from concrete to abstract – metaphorical – concepts. Referring to the first conceptual level – the source domain for the metaphor – one must remember how Lakoff (1987) defines the appropriate concepts and categories.[14] According to Lakoff (1987: 279), 'basic-level and image-schematic concepts are directly meaningful concepts…, [having an] internal structure'.[15] The conceptual content is meant to be formed by 'a rich mental image, characterizing the overall shape' of the object, and by 'a schematic structure' formed from different image-schematic structures: e.g., the concept of MAN 'is structured as having an UP-DOWN organization; it is structured as a container having an INSIDE and an OUTSIDE' (Lakoff 1987: 280). Lakoff acknowledges that these schematic structures do not exhaustively structure the concept of MAN, even though he does not make clear what else the conceptual content of MAN can imply. He claims moreover that these concepts are 'symbolic structures' and that they can build complex cognitive models structured by image schemas. He argues that, for every concept, one finds a corresponding category in any given domain of discourse. Linguistic expressions get their meaning either by 'being associated directly' with 'idealized cognitive models' or by 'having elements of the idealized cognitive models' (Lakoff 1987: 291).

Coseriu (2000 [1990]) heavily criticizes *prototypes semantics*. In one of his lectures delivered in Cluj-Napoca, Coseriu (1999) concludes that Lakoff's CS cannot avoid his objection to prototypes semantics. In both cases, Coseriu criticizes the principle of 'inference of the general'[16], showing that,

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[12] The concept of universe of discourse originates in logical semantics. Zlatev follows Sinha's (2004) usage.

[13] The four levels of meaning embodiment proposed by Zlatev (2009b) and developed within an evolutionary framework are biological, phenomenological, significational (sign-based), and extended embodiment.

[14] See also (Lakoff & Johnson 1999, De Oliveira & Bittencourt 2008).

[15] A few pages after stating that every concept has an internal structure, Lakoff writes (1987: 279) that 'every concept either has internal structure or it does not'. He calls the concept with no internal structure 'primitive' and the one with internal structure 'complex'.

[16] The discussion of 'robin' as the prototype of 'bird' is widely known. Coseriu argues that, in the case of the

under closer scrutiny, prototype semantics is no longer '"semantic" theory proper'; nor is it 'cognitive': it is, at best, a 'semantics of things' and the 'cognitive dimension' named by these semanticists relates to 'designated objects and to the knowledge related to things' but not to 'linguistic meaning' or 'knowledge of linguistic meaning' (Coseriu 2000 [1990]).

Two central characteristics of – mainstream – CL expose it to the same objections Coseriu addresses to Lakoff. The first characteristic – also discussed by Cuenca and Hilferty – concerns the way 'cognitive linguistics proposes a direct equivalence between linguistic meaning and conceptualization' (Cuenca & Hilferty 1999: 185; my translation[17]). The result is that, 'as it happens in conceptualization, it happens in the case of linguistic meaning as well: it cannot be understood without being contextualized' (Cuenca & Hilferty 1999: 185; my translation[18]). Taking their comment as a starting point and extending Coseriu's main objection, I would claim that most of cognitive linguistics 'completely ignores… linguistic knowledge represented by the meanings of a particular language, and only considers their application in designation, thus muddling up the linguistic knowledge of meanings and the knowledge speakers/hearers have of the objects ("things", "events", etc.) in the external world' (Coseriu 2000 [1990]: 41).[19]

The second characteristic relates to taking over the prototype semantics within the framework of lexical semantics[20] and other disciplines in CL. CL bases itself on the Lakoff approach to semantics, and, therefore, states that linguistic meaning is centered around a prototype: i.e., a central sense. Unlike the Lakoff approach, CL distinguishes however the 'intensional' from the 'extensional' level of linguistic meaning. Nevertheless, the problem persists in how the intensional level is characterized.[21]

In the reminder of this section, I will refer with no distinction to both characteristics and present my objection in three steps.[22] First, it is known that, as an 'usage-based' approach to semantics (e.g., Geeraerts 1993, 1997, 2000, 2010) or grammar (e.g., Taylor 1999), CL is mainly interested in the way linguistic meaning is understood and how it varies between different contexts of discourse. CL views the relation between conceptual content ('concept') and extra-linguistic reality as the primary

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supposed constitution of the prototype for 'bird' through 'analogical extension', 'the prototype of "bird" *must already be* "*bird*", and not simply "robin"', because 'what is added *per analogiam* is not "something like a robin" or "examples of a robin", but another example of "bird"'. What matters 'is not the extension from the example "robin" [to "sparrow", "swallow", or "blackbird"], but the inclusion in the category (the "genus", so to speak) "bird"' (Coseriu 2000 [1990]: 39). See also (Van der Gucht, Willems & De Cuypere 2007).

[17] 'La lingüística cognitiva propone una equivalencia directa entre el significado y la conceptualización'.

[18] 'Igual que sucede con la conceptualización, el significado no se puede entender si se considera descontextualizado'.

[19] See also (Rastier 1989).

[20] For instance, Geeraerts proposes (2000:85) a 'distinction between two different levels of prototypicality': namely, between the *semantic* level, where prototypicality refers to the relation between 'a lexical item and its meaning', and the *referential* one, where it refers to the relationship between 'a lexical item in one of its meanings and the referent corresponding to that meaning'. He intends that his two levels allow differentiating between 'the true meaning differences' (which involve *polysemy*) and 'referential specifications' (which involve *vagueness*). He uses prototype theory to explain 'various forms of salience effects' and pleads for 'a typology of salience phenomena' within lexical semantics. (See also Geeraerts 1993, 2010.)

[21] For a detailed critique of CL's approach, see (Willems 2011).

[22] My strategy reprises, *mutatis mutandis*, Coseriu's (1992a) critique of prototype semantics and its variants.

consideration in explaining linguistic meaning. CL conceives therefore the structural relations especially in their *referential* dimensions and not strictly in their semantic relations within the lexical fields.

Second, overemphasis on the semantic variation of a linguistic item in language use (e.g., Geeraerts 1993, 2000, 2010; Taylor 1999, 2003; Tyler & Evans 2001, 2003; Evans 2006) leads to an improper overlap of the word's meaning with its 'conventional uses'.[23] This way of doing things shows that cognitive linguists understand semantic variation as 'a *prerequisite* of the flexibility with which they [linguistic items] are instantiated in language use, rather than a *consequence* of it' (Van der Gucht *et al.* 2007: 737; *emphasis original*).

Third, if there is an equivalence between aspects of categorization and concepts – as CL supposes – and if concepts are exclusively discriminated by their referential relations, the logical consequence is that the concepts are meant to correspond to, or to constitute the linguistic meanings themselves (*signifiés*) (see e.g. Taylor 1999, Langacker 1987). [24] In this way, not only features pertaining to pre-linguistic categorization but everything that belongs to contextual use and interpretation may become semantically relevant. Violi (2000) questions this position and rightly points out that Geeraerts and other cognitive linguists confuse categorization processes with semantic ones. They reveal a tendency to introduce psychological phenomena,[25] 'which may well have no semantic relevance at all', into semantics.[26] Violi's argument is generally agreeable, with some amendments, to Coseriu's more fundamental objection. Indeed, it is fair to say that Coseriu's critique applies not only to Lakoff's semantics but to all cognitive linguistics that takes into consideration only the contextual meaning and for which linguistic knowledge reduces to 'the knowledge related to the things'.

In spite of his critique of prototype semantics and the Lakoff approach, Coseriu does not intend that extra-linguistic knowledge should be excluded from semantics. His concern is only that these trends mistake linguistic meanings (*Bedeutungen*) for the things designated and for the knowledge related to them. He has pleaded for many years for a *skeological* linguistics (from Gr. *skeuos* 'thing') – but he understands it not as *Sachsemantik* ('semantics of things') but as *sachbezogene Semantik*: i.e., a

[23] Analizying Tyler and Evans' (2001, 2003) concept of polysemy, Van der Gucht writes that cognitive linguists' reasoning 'is circular and demonstrates nothing: first the meaning of the linguistic item is explicitly identified with its readily apparent "polyvalence"…, then, in a second move, this demonstrable polyvalence – i.e., the fact that one meaning (*signifié*) can take on various (theoretically: an infinite numbers of) senses when applied to different referents – is declared to be, by fiat, the meaning (or meanings) of the linguistic item under consideration)' (Van der Gucht *et al.* 2007: 739).

[24] For a more detailed critique, see (Willems 2011).

[25] See also Van der Gucht's ' (Van der Gucht *et al.* 2007: 739) critique of the cognitive linguists' strategy of positing different psychological motivations to pick out different senses of a word.

[26] Violi pleads for the replacement within lexical semantics of *categorial prototypicality* with *semantic typicality*. Taking a 'usage-based' perspective, she assumes that meanings are 'never completely context-free, but are instead always indexed to some standard context of reference' (2000: 113). Violi defines 'the semantic typicality' as 'the habitual or regularity aspect of meaning' (Violi 2000: 112). Although I do not take a position on this, I believe that her most insightful contribution to semantics is in emphasizing and describing the regularity and structure of the 'standard context of reference' against which is supposed to appear the semantic typicality. Her ideas can be better valued in Coseriu's theory of the *contexts of speaking* (see Section 3.1.)

kind of semantics that is built upon – so dependent on – the semantics of linguistic meaning and not separate from it. Kabatek raises the same objection against CL: 'if one accepts that we structure the world pre-linguistically, is then this structuring the immediate foundation of linguistic structuring?' (Kabatek 2000: 201; my translation[27]). His position is that 'we do not move from things towards language or from the *designata* towards the linguistic meaning, but rather we find linguistic signs, which, as signs of a [linguistic] community, "are already there", related to things' (Kabatek 2000: 201; my translation[28]) – as 'historical ways of speaking'.

3. FROM COGNITIVE FOUNDATIONS TO INTEGRAL SEMANTICS

3.1 The functional autonomy of language

Coseriu's (2000 [1990], 1999) critique of the first conceptual level of CS theory and Kabatek's well-made point raise one of the most challenging problems to be solved at present. A common idea among researchers in CL[29] is that language (as well as any other form of cognition in general) is grounded in our embodiment. They suppose a continuum between body, mind and language, with a straightforward continuous movement from perception to language – the only variation consisting in the degrees of abstractness involved in the process.

Consider the problem in the usual terms of embodiment: is linguistic meaning 'disembodied' or not? Except for those from the first generation of cognitive science, most cognitive researchers would agree that linguistic meaning is embodied. As far as I know, there is only one study examining the problem of disembodied meaning head on: (Zlatev 2009b). Zlatev considers the possibility of dis-embodied meaning when he characterizes the relation between meaning and embodiment at the level he calls *the extended body*: 'with the ascent of language, and especially external representations such as notions, pictures and diagrams, the role of the human body here is relatively marginal. Thus, in one sense, one can argue that meaning at this level becomes "dis-embodied". But we could also describe this as a matter of "extended embodiment"…. We could use the term "extended body" to stand for all those modes of meaning and communication that both transcend the limits of human embodiment' (Zlatev 2009b: 155). [30] I choose the opposite approach and argue for the *disembodied* character of linguistic meaning.

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[27] 'Die Frage aber ist, ob wir die uns bekannte Welt vorsprachlich strukturieren und, wenn ja, ob diese Strukturierung die unmittelbare Grundlage sprachlicher Struktur ist'.

[28] 'Wir kommen nicht von der Sachen zur Sprache oder vom Designat zum Semnificat, sondern finden der sprachlichen Zeichen, die als Zeichen der Gemeinschaft sozusagen "schon da sind", im Bezug auf die Sachen'.

[29] See e.g. (Lakoff 1987; Johnson 1987; Langacker 1987; Gibbs 2003; Taylor 1999, 2003; Geeraerts 1993, 1997, 2000, 2010; Tyler & Evans 2001, 2003).

[30] His position should be understood mainly as a rejection of the disembodied and abstract models of cognition from the first generation of cognitive science. Zlatev's notion of extended body suggests his affiliation to that perspective in cognitive science that emphasizes the prominent role in cognition of the body (e.g., Gallagher 2005, Thompson 2007, Zahavi & Gallagher 2008) and embodiment – sometimes conceived in a radical manner: see e.g. (Clark 1999).

The proponents of embodiment theory, Lakoff and Johnson, answer the question positively. So Lakoff (1987: 286) explains that the concept of WAITER is understood relative to a restaurant scenario. Any linguistic expression gets its meaning either by 'being associated directly' with 'idealized cognitive models' or by 'having elements of the idealized cognitive models' (Lakoff 1987: 291). Because the WAITER concept is structured internally by different image-schematic structures illustrating the restaurant scenario, it is supposed that experiential content is part of linguistic meaning. The CS view can be neatly summarized: if language only reflects cognitive thought processes and pre-linguistic cognitive structures, then linguistic meaning is embodied. Lakoff's position could be characterized as a very strong version of embodiment. It reduces language to conceptual structures and ignores any contribution of language to human cognition.

Is there any proper content of linguistic meaning? Does the linguistic meaning of 'waiter' not have a proper content separate from the contextualized, extra-linguistic restaurant scenario? Unlike Lakoff, many scholars from CL acknowledge the presence of an independent level of linguistic – or semantic – representation (see Section 1.3). At first glance, such a position is deceptive and could lead one to presume that the CL school adopts a much more moderate view than Lakoff defends. The evidence shows the opposite. Willems (2011) demonstrates *in extenso* that CL's notion of linguistic sign[31] is based on the same underlying premise of continuity from sense perception to language as in Lakoff's account and sees in this the cognitive linguists' main error. He concludes that their notion of 'semantic representation' is completely fallible, since it involves aspects that pertain to 'general encyclopaedic knowledge' (involving 'conceptualisation', 'imagery', or 'construals', and different 'pragmatic aspects') and not to 'language-specific semantic knowledge'. He points out that cognitive linguists customarily see the linguistic sign 'in terms of the place where world knowledge is associated ("paired") with a "linguistic form"' (Willems 2011: 38). This highlights a misunderstanding of the nature of the linguistic sign – a fallacy that seems to be pervasive in CL. Most significantly, all these facts undermine any attempt by CL to account for the historical and intersubjective dimensions of language, so long as a proper notion of linguistic meaning ('semantic representation'or 'concept'/*signifié*) is still missing.

Though the product of a different tradition of research, Willems' critique is partly compatible with that initiated by researchers of 'the minor stream' in CL: e.g. (Itkonen 2003, 2008; Zlatev 2007, 2008a, 2010; Sinha 1999; Sinha & Rodríguez 2008; Harder 2007). These scholars systematically demonstrate that embodiment theory is insufficient for linguistic explanation and, especially, for any embodied theory of language. With the emergence of the third generation of cognitive science, it becomes clear that, despite the undeniable efforts of many earlier researchers to link language to embodiment, the necessary conceptual apparatus to provide a coherent account of language and

[31] Willems analyses the conception of Taylor (1999), and explains that Taylor's view is shared by a considerable number of cognitive linguists.

cognition has been lacking. The source of the failure resides in the foundational concepts of CL such as image schema and embodiment.

In numerous articles, Itkonen and Zlatev argue convincingly for a damaging denial of the role of consciousness in CL – a denial that originates in the role given to the concept of 'cognitive unconscious' in mainstream cognitive science (Lakoff & Johnson 1999). This notion remains in the headlines of many accounts of *embodied cognition* (e.g., Gallese & Lakoff 2005) despite all clear evidences to the contrary.[32] Itkonen and Zlatev argue that, even when the role of consciousness is acknowledged, it is misinterpreted: e.g., Itkonen (2008) shows that Talmy (2000) wrongly relates consciousness to introspection and identifies linguistic meaning with subjective, 'private', psychological structures accessible to consciousness through introspection. This raises two major problems. It shows little sensitivity toward the social or *intersubjective* character of language and particularly toward the understanding of linguistic knowledge as 'common', intersubjectively shared knowledge. Even when the public character of linguistic meaning is conceded, it is reduced to 'the production of sounds or written symbols' (Chafe 1994: 12, cited in Itkonen 2008: 17). Itkonen (2006) demonstrates how this much repeated fallacy is based on a misunderstanding of what is logically primary, 'objective' knowledge – i.e., *social* norms and conventions – versus what is secondary, subjective, 'individual' knowledge – even though the social norms are accessible only by means of this fallible subjective knowledge. The fallacy is widespread in CL[33], both in experientialist accounts (Lakoff 1987, Johnson 1987, Langacker 1991) and in embodiment theory (Lakoff & Johnson 1999) and stands as evidence for the lack of an adequate concept of intersubjectivity.[34] Third generation scholars (Itkonen 2008, 2009; Zlatev 2008a, 2010, 2011; Sonesson 2009) are consistent in stressing that the reduction of common knowledge to individual, 'private' experiences – which are to be studied through observation and introspection – leads to a self-destructive tendency to naturalize the 'human' sciences.[35] They argue that the 'public vs. private' dichotomy could not properly be solved by the conceptual tools of the earlier generation, because those tools were not compatible with a phenomenological perspective (Zlatev 2010, Sonesson 2009, Harder 2007). Applied to human sciences, the phenomenological perspective[36] should necessary start out from those facts having the

[32] Itkonen (2008, 2009) and Zlatev (2007, 2008a) provide at least three 'conceptual' arguments to demonstrate 'the dependence of language on consciousness'. First, linguistic meanings are commonly shared contents within a linguistic community, and this implies consciousness. Second, as common knowledge they are accessed by 'normative intuitions' and thus involve the conscious knowledge of 'rules of correctness'. Third, judgements of correctness necessary imply a conscious subject.

[33] Another good example is the case of mental imagery, which is supposed to be conventionalized or shared. Itkonen (2006) argues that 'conventional mental image' is a self-contradictory notion, because 'conventionalized' means socially shared. Thus, it is opposed to everything individual and psychologically subjective (see also Zlatev 2010, Sinha 1999, Harder 2007).

[34] The essays on intersubjectivity in *The Shared Mind: Perspectives on Intersubjectivity* (Zlatev *et al.* 2008) demonstrate the constant efforts to link intersubjectivity to other central concepts in cognitive science, such as embodiment (e.g., Gallagher 2005; Zahavi 2003; Sonesson 2007, 2009) and language (Itkonen 2003, 2006, 2008, 2009; Zlatev 2007, 2008a, 2010; Sinha 1999; Sinha & Rodríguez 2008).

[35] For a defence of these sciences as hermeneutical sciences in CL, see (Itkonen 2003, 2008; Zlatev 2010, 2011).

[36] …Or rather, 'phenomenological method': see (Sonesson 2009).

character of evidence in consciousness when one reflects on them.[37] With few exceptions, CL fails to adopt a phenomenological perspective. Zlatev (2010: 436-438) writes that, although some aspects of CL could be compatible with a phenomenological perspective, one fundamental factor gets overlooked: the problem of linguistic representation and, thus, the *linguistic sign*. The way these notions have customarily been treated in CL makes them the most challenging ones for an embodied theory of language.

From the phenomenological and hermeneutical perspective of third-generation cognitive science, Zlatev[38] claims (2007, 2008a, 2010) that any comprehensive theory of language should start from the essential properties of language: *conventionality*, *representationality*, and *conscious accessibility*. [39] The conventionality of language refers to the way linguistic meaning is shared by all members of a community who speak a given language. Language is a social institution that exists 'primarily between people rather than (only) *within* people' (Zlatev 2007: 243; *emphasis original*). If language presupposes lexical meanings that are shared by a community of speakers, and if the community know how to use the rules for combining these meanings, it means that language is accessible to consciousness (Zlatev 2007; see also Zlatev 2008a, 2011). As for representationality, Zlatev argues (2007) that what CL most needs to explain the embodiment of language is a concept of (linguistic) *representation*.[40] He offers his own concept of representation as a relationship between expression and meaning (or content) on the one hand, and between an assertive speech act and reality on the other. He claims that the relationship between expression and meaning is similar to Saussure's account of 'signifier' and 'signified', with the qualification that the meaning is considered 'as conventional context-general *content*' (Zlatev 2007: 248). This concept is, he believes, the only concept on the strength of which the embodiment of language can be explained. It is able to link language to the sensorimotor roots of cognition (Zlatev 2005) and, simultaneously, account for the qualitatively new and ontologically 'higher' level of language (Ikegami & Zlatev 2007). From the viewpoint of cognitive semiotics, the concept of (mental) representation is similar to that of a sign, described by three major features. (1) A representation occurs within an act of imagination, rather than perception.[41] (2) The act of imagining implies a conscious subject who is supposed to imagine a specific action or event. (3) The conscious subject should be able to differentiate between an *expression* and its *content*,

[37] Applied to linguistics, the phenomenological method aims to provide 'a careful analysis of what appears in consciousness when we reflect on our knowledge and use of language' (Zlatev 2010: 422).

[38] In the remainder of this section, I will refer most to Zlatev's approach. He is one of the most outspoken proponents of the new perspective, and he provides the most integrative attempt developed within the third-generation framework. He grounds his research in, and corroborates it with, the previous works of representative scholars in cognitive science (e.g., Itkonen 2003, 2008, 2009; Sonesson 2006, 2007, 2009; Zahavi 2001, 2003; Gallagher 2005; Gallagher & Brøsted-Sørensen 2006; Gallagher & Zahavi 2008).

[39] Zlatev grounds his theory in linguistics in Itkonen's 'realistic' stance (Borcilă *forthcoming*).

[40] Zlatev (2007, 2009a) notes the difficulties one may encounter in rehabilitating the concept of (mental) representation. The second generation entirely rejected this concept, because its use in the first generation of cognitive science led to versions of mentalism and disembodied cognition.

[41] As an act of imagination, its primary function is to *re-present* non-present actions or events, rather than to reiterate the perception. Zlatev makes use of Piaget's (1945) notion from developmental psychology of 'symbolic function', by which Piaget explains the emergence of symbols in early childhood.

so that they neither overlap 'in time or space', nor are they 'perceived' to be '*of different nature*' (Sonesson 2007: 93, *emphasis original*; see also Zlatev 2009a).

I am in agreement with Zlatev, at least on the following points. First, the emphasis on linguistic activity as the activity of a *conscious* subject and, thus, the redemption of human subjectivity within the field of human sciences represents a significant advance in CL over previous generations as well as a longstanding tradition in linguistics research that most likely originates in Nineteenth Century positivism. Second, the systematic consideration of the *intersubjective* nature of linguistic meaning in terms of shared or common knowledge is a breakthrough from the second-generation theoretical framework, laying the foundations for a new science of linguistics. Third, the acknowledgement of the *cognitive* character of linguistic meaning and, thus, the functional autonomy of language provides a common ground between CL and other traditions of linguistic research such as IS. In spite of all these, certain aspects of the approach remain in need of clarification.

Although this third-generation research recognizes the functional autonomy of language and makes a clear distinction between pre-representational cognition and language, it also assumes that language is partially embodied. It is not my intention to deny this or its relevance. As said, this 'minor stream' within CL acknowledges language as 'the main "cognitive revolution" in ontogenesis' involving 'one higher ontological level: that of consensual social reality, mutual knowledge' (Ikegami & Zlatev 2007: 248). Basically, this agrees with my position.

Yet, if one assumes that language is 'the main "cognitive revolution" in ontogenesis' and that it introduces a 'higher', '*ontologically* different' level to the pre-representational one, it still remains to be explained how the transition from pre-reflectively shared mimetic schemas[42] to the conventionality of language occurs. More specifically, it is unclear what the content is that distinguishes the level of protolanguage[43] from the immediately superior level. Although the symbolic nature of language is acknowledged through its 'systematic' and 'conventional/normative' character[44], it is disregarded in the very moment that linguistic 'symbols' or semantic conventions are acquired in ontogeny.

The dilemma could be solved through a deeper exploration of the representational character of language. In my view, the crucial factor that motivates the transition from pre-verbal mimetic schemas to language is the breakthrough from the representational toward the symbolic dimension of the sign. The transition to the ontologically 'higher' level of language coincides with the acquisition of symbolic representation, where the primary mental representations are replaced by the symbolic ones. The emergence of this new, symbolic level presupposes the rearrangement of the world according to

[42] Zlatev defines mimetic schemas as '*dynamic, concrete and pre-verbal representations, involving the body image, which are accessible to consciousness, and pre-reflectively shared in a community*' (Zlatev 2005: 334; *emphasis original*). He specifies that, although language is grounded in these mimetic schemas, they 'do not *constitute* linguistic meanings', because, in opposition to language, mimetic schemas lack the conventionality and systematicity of language.

[43] See (Zlatev 2008b, 2009a) for details of the mimesis 'hierarchy'.

[44] The public and normative character of language presupposes release from individual representation with its subjectivity.

the clear-cut symbolic patterns of language.[45] Within this new world structuring, the role of pre-verbal representations, if any, becomes marginal. The conventionality of language is not something that could just be added to one's pre-verbal representations; rather, the representations are reinterpreted from the viewpoint of the emerging language categories. I am not sure if Zlatev would agree, but I believe that this is the genuine sense in which one can speak of a 'qualitatively new' and ontologically 'higher' level of language. In any case, from the IS perspective, the forms of pre-representational cognition are no longer part of linguistic meaning proper[46]; instead, they become active in contextualizing the speech acts by means of which one refers to the world.

3.2 On the cognitive nature of linguistic meaning

Beyond the above-mentioned problem, I agree with Zlatev (2007, 2010) that language has the properties of representationality, conventionality, and accessibility to consciousness. In Coseriu's linguistic theory, these properties are re-interpreted in a dynamic/energetic perspective. Analogously to Zlatev, Coseriu speaks of three essential – indeed, primary – universals of language: *creativity*, *semanticity*, and *alterity* (see Coseriu 1987 [1978], 2001)[47]. They are *sine qua non* to language.

Zlatev's representationality property corresponds to Coseriu's semanticity of language, both of which refer to language's cognitive dimension. The most basic function of language is to signify the world: that is, to transform the pre-verbalized world into a 'semantic' one, a world one can represent in the mind, think upon, and understand. This basic function coincides with language's finality: to create semantic (or symbolic) entities in order *to structure one's experience in the world*. I wish to emphasize Coseriu's thesis of the 'absolute priority of language' (see e.g. Coseriu 2001), because this Humboldtian thesis distinguishes IS among other contemporary linguistic theories. CL assumes that the world is structured either pre-conceptually or conceptually and that pre-linguistic cognitive structures ground linguistic meaning. Certainly, Coseriu[48] does not deny that the world may be structured prior to language. However, in his view, the claim that pre-linguistic structures are the bedrock of language is an avoidance of language's cognitive character and, as such, a denial of language's functional autonomy.[49] Coseriu (1992b: 22) argues that, although the world may indeed be structured prior to language, this pre-verbal structuring (*Artikuliertheit der Welt*) cannot be known independently of language: for anything to be known, it must transcend the individual mind and be

[45] See also (Coseriu 1992b).

[46] *Meaning proper* is the content of the historical level in Coseriu's matrix and methodologically corresponds to Saussure's *signifié*. For further distinctions and its delimitation from designation and sense see **(**below, **2.3**, and De Cuypere 2008; also Van der Gucht *et al.* 2007, and Willems 2011).

[47] The language's 'accessibility to consciousness' is *implicitly* assumed in IS as the underlying property of language.

[48] See (Coseriu 1992b), Coseriu's most important study in this respect.

[49] See also the critique of Van der Gucht and colleagues (2007), which demonstrate that this practice became a commonplace today in cognitive sciences. The authors suggest that it is a consequence of the 'embodiment postulate', which derives from a 'deeper epistemological premise', namely that 'language *mirrors* underlying conceptual structures, which in turn are determined by the typically human experiences of human beings vis-à-vis extralinguistic reality' (Van der Gucht *et al.* 2007: 750; emphasis added).

objectified as known through the knowledge of another. (See the discussion about the alterity of language below.) Coseriu (e.g., 1988: 206) sometimes describes this linguistic knowledge of the world in Leibniz's (1684) terms: '*cognitio clara distincta inadequata*'. Coseriu holds that Leibniz's 'scientifically inappropriate knowledge' is a form of knowledge through intuition, sufficient for the linguistic knowledge to be perceivable as objective knowledge. Concerning the representational character of language, he emphasizes the symbolic and the intuitive[50] nature of linguistic categories. In his view, the naïve speaker does not use abstract categories in speaking, but rather depends on linguistic intuitions. Viewed as activity (*enérgeia*[51]), this linguistic intuition is meant to create a unitary 'image' of both the object and its infinite possibilities (Coseriu 1972; see also Borcilă 2003, *forthcoming*). Coseriu sometimes refers to such intuition as Husserl's *eidetic intuition*[52] (see e.g. Coseriu 1967 [1954]), with the difference that Husserl's eidetic intuition is captured within historical ways of speaking: i.e., within language. Thus, while as *intuition* language works as an image of the world, as *eidetic intuition* it is apprehension of the unity of thing and of its infinite possibility.

Zlatev's (2007, 2008a, 2009a) property of *conventionality*, immanent to the social character of language, roughly corresponds to Coseriu's second universal: *the alterity* of language. For Coseriu, this property is conceived from a dynamic perspective and, thus, signifies not only already shared linguistic meaning (which corresponds to the historically given' viewpoint), but also, and foremost, the creation of common historical meanings. In other words, before people can share linguistic meanings, they need *to create* them. This creation is a common achievement in objectifying linguistic meanings for both *ego* and *alter ego*. Coseriu summarizes the importance of the viewpoint of activity (*enérgeia*) in language (1977/2001: 25): 'it can be said that language as *enérgeia* is, in the same act, both knowledge and… objectivation of this knowledge'.[53]

The third language universal, creativity, has a prominent role in Coseriu's thinking; indeed, it should be conceived as logically primary, because it represents the *primum movens* of the whole linguistic activity.[54] IS understands the finality of language as immanent in semantic creativity, evoking the intention to create shared meanings in order to signify – or refer to – the world. Borcilă (2003: 58) clarifies the consequences for linguistic science of this basic assumption about language's creative dimension: any determinist/causal explanation of the human cultural activities is ruled out,

[50] Coseriu appropriates the concept of *intuition* from Croce, who distinguishes between *intuition* and *concept* (Coseriu 1972, 2003; see also 1988).

[51] Coseriu has employed the concept of *enérgeia* since 1952 (Coseriu 1985 [1952]; see also 1988 [1979], 1985, 1988, which discuss the internal dynamics of and functional relationship between *enérgeia*, *dynamis,* and *ergon*). For further readings on the importance of these concepts in epistemology of integral linguistics see (Di Cesare 1988; Laplace 1994; Borcilă 2002, 2003).

[52] See also (Vîlcu 2010). As far as I know, this is the first book to explore systematically the phenomenological grounds of Coseriu's thinking.

[53] 'On peut dire que le langage en tant qu'enérgeia est, dans une seul et même acte, connaissance et en même temps fixation et objectivation du connu'.

[54] For Coseriu (1952/1985, 2001), creativity plays an essential role in the entire range of human cultural activities, not only in linguistic activity. Among these activities, language is the foremost and the basis for all the others.

and the study of human cultural activities is accounted for from the perspective of their inherent finality and intentionality, not aside from them (see also Section 3.3).

Coseriu's three essential universals of language – which, together, constitute the signifying function of language – lead to a particular way of understanding the cognitive nature of linguistic meaning. The cognitive character of language is described by its double dimension: on the one hand, language mediates between *ego* – knowing subject – and world; on the other, language mediates between *ego* and *alter ego* – other subjects. This double dimension – something that is known is also *recognized* to be known – raises linguistic cognition to the level of *cognoscitive* activity[55], and so distinguishes it from pre-representational cognition.

3.3 Three levels of linguistic content

Coseriu's distinction of three levels of linguistic content in his matrix[56] is highly operational. (Linguistic) meaning proper is ranged on the historical level, as 'the linguistically-given content in a particular language, the particular form of the possibilities of designation in a given language' (Coseriu 1985: xxx). Designation is ranged on the universal level, as the relationship of linguistic meaning to 'extralinguistic reality itself, be it a state of affairs or the corresponding contents of thought' (Coseriu 1985: xxx). Sense is defined as the text's content proper: 'the particular linguistic content which is expressed by means of designation and meaning, and which goes beyond designation and meaning in a particular discourse, such as a speaker's attitude, intention or assumption' (Coseriu 1985: xxx).

This basic semantic distinction is not only useful but requisite today, when so many perspectives on linguistic meaning are confused by the lack of it even as each claims to exhaust the phenomenon of (linguistic) meaning or provide the best explanation for it. Coseriu's matrix shows that these seemingly conflicting perspectives on linguistic meaning propose, in fact, complementary explanations and can be ranged on different levels in his matrix, according to which aspects they choose mostly to emphasize.

As I have shown in Section 1.3, mainstream CL mistakes (linguistic) meaning for designation. To make the distinction between meaning proper and designation more palpable, consider the following example: *I am walking* **with** *my friend*, and *I am eating* **with** *the spoon*. Coseriu (1988) argues that the relationship between designation and meaning proper is asymmetrical. The meaning of *with* is the same in both statements, but the designation thereof is different. The distinction is established already in the definition of meaning proper, as 'the particular form of the possibilities of designation in a given language'. Meaning proper is pure *virtuality* (see Section 2.2), with neither concrete nor Platonic existence outside the act of designation (Kabatek 2000). Unlike Saussure's *signifié*, Coseriu's meaning

[55] The term was first used by Martinez del Castillo (2003) in relation to Coseriu's IS, for the same reason I use it here: to express the double dimension of language's cognitive nature.
[56] The matrix is described extensively in (Coseriu 1985, 1988; see also Zlatev 2011).

proper has a unitary, 'positive' content – *einheitliche Bedeutung* – not just differential meaning or value. Laplace (1994: 129) correctly notes that the concept of *einheitliche Bedeutung* allows Coseriu to distinguish linguistic meaning within a historical language (*Sprachbedeutung* or *einheitliche Bedeutung*) from contextual meaning (*Redebedeutung*). Linguistic meaning within a historical language signifies the same thing in all contexts of speaking: *with* will always have the meaning 'und X ist dabei'[57]. In contrast, contextual meaning signifies according to the linguistic or extra-linguistic context in which it appears: e.g., *the instrument, the person who accompanies, etc.* Such a distinction allows discriminating what is linguistic proper from that which pertains to specific contexts of speaking.

The distinction between meaning proper and its contextual variants is necessary from another perspective. As I have shown (Section 1.3), contemporary linguistics has a clear tendency to confuse meaning proper with its contextual variants and to consider the additional, contextual features of a word as linguistic meaning proper. Coseriu considers this unjustified: the contextual variants present *per definitionem* more features than meaning proper; for this reason, they simply cannot be confused (Coseriu 2000 [1990], 1992a).[58] He pinpoints the confusion as one of the major problems in analytical semantics and argues that CL maintains the same lack of distinction. As regards the famous example '(to) climb', this distinction helps to solve, very easily, the controversial problem posed by Fillmore's example. Coseriu shows that the linguistic meaning of 'climb' implies neither downward nor upward movement, but solely movement 'on a vertical or inclined plane' (Coseriu 2000 [1990]: 28). Likewise, 'clambering' does not imply 'by means of hands and feet or paws', etc., but only 'by means of extremities'. In this way, '(to) climb' allows the same linguistic meaning to apply to very different kinds of beings – plants, people, animals – and be used metaphorically as well (Coseriu 1990: 256; see also Taylor 1999 for a defense of the cognitive stance).

4. METAPHORICAL MEANING AND ELOCUTIONAL KNOWLEDGE

4.1 The knowledge of things

It is not my intention to present all the levels of language and all the contents of Coseriu's matrix. The level where CL and IS cross their paths and are able to explain metaphorical meaning is the universal one; therefore, I will consider this level alone.

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[57] See (Coseriu 1988: 84).

[58] 'For structural semantics, the "meaning" that is realised in a particular use, in an act of designation, is never the *signification* as such – the intralinguistic semantic entity – but always a particular *variant* of that entity (just like the actually realised speech sound is not the phoneme itself, but a variant). And a variant offers, by definition, more features than the corresponding functional entity. Moreover, structural semantics aims at delimiting the functional entity on the level of the *language system*, i.e., on the only level where the functional entities constitute a structure of idiomatic units, proper to a particular language. On the other hand, structural semantics also account for the fact that language is not only a "system", but also encompasses a level of *normal language use*. On the latter level, a particular variants turns out to be, in certain contexts, the "normal" variants, so that it constitutes an "invariant" of normal language use' (Coseriu 2000 [1990]: 28).

As Laplace rightfully notes, the universal level is 'prior (not historically, but conceptually) to the emergence of different historical languages' (Laplace 1994: 109; my translation[59]). The facts one speaks of on this level are not yet the syntactic and grammatical norms of historical language. Rather, they pertain to the semantic-referential level of language. The universal level constitutes 'a stage where the difference between language and historical language is still not required' (Laplace 1994: 108, my translation [60]). The study of competence or *know-how* on this level comprises, on the one hand, what Coseriu terms *the grammar of enunciation*: that is, the study of 'the specific *functions* of the speaking κατ' ἐνέργειαν'[61] and 'its specific *instruments*, which can be both linguistic and extralinguistic' (Coseriu 1967 [1956]: 290; my translation[62]). On the other, it comprises a general theory of elocutional knowledge (Coseriu 1988): that is, the study of aspects of linguistic knowledge of the world that do not belong to a particular historical language. Coseriu distinguishes between (1) knowledge of things, as the permanent frame of reference for speech acts; (2) knowledge of principles of thought used by speakers to discriminate or judge intuitively the 'congruence' (or 'appropriateness') of someone's speaking; and (3) the capacity for interpreting particular language functions.

In what follows, I refer only to Coseriu's concept of knowledge of things, to argue for the possibility of integrating developments from cognitive science at this level: in particular, Johnson's (1987) notion of *background* and Sonesson's hierarchical model of things within the *lifeworld* (2001).

What does this knowledge of the world mean for Coseriu? Coseriu defines it as the implicit background of speaking: 'our ordinary experience in the world' is 'the [presupposed] background of our speaking' (Coseriu 1988: 101). Coseriu draws upon a considerable number of 'disputed' facts to circumscribe his concept. For example[63], to understand such a simple statement as *I plan to go to the mountains next week*, one must make use of one's knowledge of how things actually are in the world. One takes for granted that there is a next week, that the sun will rise tomorrow, that another day follows after tomorrow, and that the mountains will continue to exist. What is presupposed by one's speech acts is the fact that the things are the same as one has experienced them before. These assumptions provide a background, a horizon for one's expectations about the way the world is and about the stable, normal way of things being in the world (Coseriu 1988: 102). Take another example: *he boiled the piano*. This sentence violates one's usual representations of things as well as the way one normally behaves: one does not normally boil pianos. A piano is for playing, not for other purposes such as eating or burning. The naïve speaker judges the sentence as incongruent to one's knowledge of the world. Knowledge of things presupposes that one has, from previous, non-verbalized experience, an intuitive understanding of how the things are in the world, what kind of behaviour is appropriate to

[59] 'Antérieur (non pas historiquement mais conceptuellement) a l'émergence des différentes langues'.
[60] 'À un stade où la différence entre langage et langue ne s'impose pas encore'.
[61] 'Las *funciones* específicas del hablar κατ' ἐνέργειαν'.
[62] 'Sus posibles *instrumentos*, que tanto pueden ser verbales como extraverbales'.
[63] These examples are adapted from (Coseriu 1988).

each kind of things, and which are their essential properties. Coseriu's concept of knowledge of the world is clearly symmetrical to Lakoff and Turner's (1989) hierarchical model of *the Great Chain of Being* (which constitutes the 'basic metaphor' underlying ordinary language). The difference is that Lakoff and Turner's model comprises an ascending scale of kinds of beings, defined by their essential properties and behaviour, presupposing a more articulated but also more constraining notion than what Coseriu means by knowledge of the world (Coseriu 1988: 99; see also Borcilă 2003).

Using examples, Coseriu argues that people know how things are because, as human beings, they are 'beings in the world'. This world is not the world of natural sciences but the *lifeworld*: a world of lived experiences shared with other human beings. For Coseriu, knowledge of the world is far from disembodied – making clear to which kind of reality his definition of designation refers. It is *not* the objective world presupposed by objectivist referential theories; his linguistic conception of it is not an attempt to plug into the objectively real world. Rather, it is constituted by one's lived and felt experiences as a being in the world: to put it simply, it is Husserl's 'lifeworld'. As Sonesson (2001) argues, this lifeworld is far from being the world of natural sciences. He demonstrates that this is the world of common sense, the world to which one has the most direct access. 'The common sense world could be populated with strange phenomena such as "two-dimensional objects"' (Sonesson 2001: 30). In similar manner, Coseriu argues that even the most familiar sentence such as *the sun sets down* is based on one's naïve experience of the world. Obviously, the naïve speaker's knowledge should not be confused with that of the scientist. Nobody would reject the naïve speaker's expression, countering that it is not the sun that revolves around the Earth, but the opposite (Coseriu 1988).

For Coseriu (1988: 96), every historical language has restrictions concerning knowledge of the world, even as those restrictions do not pertain to rules of an historical language but to general knowledge of the world. Consider the example: *look! A woman with legs!* Coseriu (1988: 102) writes that this statement is not incorrect as regards our knowledge of English; indeed, such constructions are possible in any language. Rather, the statement is incongruent with one's knowledge of things: *every* speaker judges such sentences intuitively as incongruent with implicit reference to what one takes for granted in one's knowledge of the world. Naïve speakers normally do not emphasize what they previously have taken for granted. We know that a woman usually has legs; it is not necessary to specify so when speaking. A statement like the one above would be the normal way of speaking in a world where women have no legs. In such a world, a woman with legs would be an exception; the specification 'with legs' would signal the existence of a new, different kind of woman. In other words, what is part of one's knowledge of the world should, usually, remain non-thematic. In the example, the non-thematic element has been emphasized and become thematic. As a result, an incongruence took place. Sonesson (2001) writes of the lifeworld (2001: 85): 'I discovered that it was necessary to suppose this world to be furnished in a particular way, notably containing hierarchies ascribing relative "values" to things'. He goes on (2001: 94) to describe the lifeworld as the 'presupposed background of all ordinary sign processes' and examines how both thematic and non-thematic

background elements are activated within those sign processes. One should ask whether thematic and non-thematic background elements function in the same way in sign processes and language. Sonnesson's development of Husserl's concept of lifeworld within his *ecological semiotics*[64] could provide a noteworthy contribution to metaphor theory on the universal level of language, at least in respect to the basic model of lifeworld hierarchy: 'lower things', 'higher things', and 'ultra-things'.

Coseriu's knowledge of the world is not essentially incompatible with Johnson's (1987) notion of background, if one disregards that notion's individualistic bias; see Section 1.2. Johnson defines background as interwoven networks, laden with image-schematic structure. His notion relies on a more basic notion of image schema as an intuitive, unconscious, and non-propositional 'recurrent pattern, shape, or regularity' in and of our experience in the world. The feature that makes the image schemas play a crucial role in the background network is that they 'are never context-free – they depend upon a large background of shared schemata, capacities, practices, and knowledge' (Johnson 1987: 30).

The concept of image schema is controversial in many respects and has been critically questioned in e.g. (Hampe 2005). In spite of all its shortcomings, the image schema's' character of constituting 'interwoven networks' is an avenue to explore. For Johnson, image-schematic networks form an ontological background in the mind: the background is not the objective world anymore but rather its projection in our minds. This may, indeed, represent a real advance in describing background knowledge in terms close to Coseriu's notion of knowledge of the world.[65]

4.2 Metaphorical incongruence and the context of culture

It is time to return to conceptual metaphor. I suggest that, by understanding conceptual metaphor as pertaining to a mental space prior to the signifying semantic space of language, CS fails to explain why metaphorical speaking exists. It is true that, using this kind of 'metaphorics of the mind' (Gibbs 1994) and the functional principle of mapping or projecting from source to target domain, one could handle descriptive data concerning basic mental operations. The idea of metaphor as projection, and the explanation of how that projection from source to target domain works are certainly substantial advances in metaphorology. Further, these findings are relevant for describing the operations of metaphorical designation – but only if they are interpreted within a semantic conception of metaphor, able to explain metaphorical creativity. What remains unexplained in the CS account is 'the intention' or 'the finality' of such meaning creation. CS fails to explain the very premise from which it starts: namely, the way metaphorical speaking is rooted in one's mode of relating to the world and understanding it. As Borcilă (2003) argues, CMT's shortcoming lies in cognitive semanticists'

[64] The notion of *ecological semiotics* originates in James Gibson's ecological, environmental physics. Within the framework of his phenomenological semiotics, Sonesson reinterprets Gibson's original insights to account for 'a science of "the natural world"', where nature 'as we experience it is not identical to the one known to physics, but is culturally constructed' (Sonesson 2001: 96).

[65] See also (Zlatev 2011). Zlatev redefines image schemas as 'principles of thought', pertaining to the universal level in Coseriu's matrix.

subordination of the language function to the other alleged "cognitive" processes of the human mind. From an IS perspective, there is no cognitive reality of metaphor outside language: the metaphor cannot be conceived as content of thought independent from the primordial linguistic structuring of experience. Rather than pertaining to a pre-verbal realm of thought, metaphor creates verbal expression and mental content simultaneously in a new designational entity or 'perceptual aspect'. Coseriu argues that the same kind of semantic creativity is involved in both metaphor and language. The only difference is that metaphorical creativity represents the maximal form of semantic creativity. Unlike CS, the integral paradigm regains the intention to create new designative metaphorical contents within the signifying function of language itself (Borcilă 2003).

I subscribe to Borcilă's argument that, in the context of contemporary scientific research, Coseriu's IS provides the most solid foundation for developing a viable theory of metaphor. As early as 1952, Coseriu writes (1985 [1952]: 80, 97, my translation, see also Borcilă 2003): 'linguistic knowledge is often *metaphorical knowledge*'[66] and metaphorical knowledge is rooted from the beginning in the 'initial denomination of what is to be known' ('the cognoscible')[67]. Coseriu's early attempts to elaborate an integral theory of language foresaw the need for 'the scientific foundation of metaphorology as [a] core field in the linguistics of *speaking*' (Borcilă 2003: 55; my translation[68], *emphasis original*; see also Willems 2003: 4). Yet, Coseriu never developed an extensive theory of metaphor. Except for the 1952 study, where one finds only the theoretical foundations for a theory of metaphor in everyday speaking, Coseriu never systematically discussed the topic of metaphor. Further developments of the integral theory of metaphor were thus necessary. In recent years, much work on this has been done within the 'integralist' studies program in Cluj-Napoca. This work accepts the idea of trans-domain projection – or mapping – of 'images', but reinterprets it as occurring between two *linguistic* contents. It sees the main contribution of CS in describing the mechanism of metaphorical designation. Take the example: *this woman is a cow*. To categorize a new aspect of experience in the speech act, two experiential domains – of 'woman' and of 'cow' – are brought together. The new aspect pertaining to the target domain – 'woman' – cannot be categorized in the source domain 'cow'. A designational incongruence occurs. Once the new aspect of experience is analogized within the image-schematic structure of the source domain 'cow', the incongruence in designation is suspended in favour of a new, reinforced congruence.

The image from the source domain is not part of the word's meaning proper but part of the background knowledge one acquires through previous experience. If one looks closer at this (shared) image, one notices that it is not a universal device. Some communities of speakers would associate the image with one's insensitivity, others with something sacred. Even as the image becomes a thematic background element, it brings forward a plethora of assumptions shared within any given cultural community. The sociocultural perspective in CS legitimately argues that experience is a matter of

[66] 'El conocimiento lingüístico es muchas veces un *conocimiento metafórico*'.
[67] 'Denominación inicial de lo conocible'.
[68] 'Intemeierea ştiintifică a metaforologiei ca domeniu central al lingvisticii *vorbirii*'.

permanent interaction with and within a cultural world. Coseriu also proposed (Coseriu 1967 [1956]) a comprehensive theory of contexts, arguing that every speech act activates contexts in which the speech act is being produced. The contexts of speaking constitute its permanent frame of reference (see also Coseriu 1981). Knowledge of things is only one of the contexts Coseriu identifies – the one that corresponds to the extra-verbal context of speaking. His concept of *context of speaking* divides into (1) idiomatic, (2) verbal, and (3) extra-verbal contexts. Extra-verbal contexts further divide into (a) physic, (b) empiric, (c) natural, (d) practical, (e) historical, and (f) cultural ones. The *cultural context* comprises the cultural tradition of either a community of speakers or all of humanity. Coseriu includes here mythology as well as traditional scientific and literary works (Coseriu 1967 [1956], 1981). If one takes into account discoveries of researchers within the sociocultural perspective in cognitive science, one must accept that the cultural context of speaking is not just one extra-verbal context among others, but rather the underlying context for all the rest (see also Coseriu 2000a, 2000b).

4.3 Creativity and metaphor

Apart from the cognitive aspect of the theory, Lakoff's CMT has difficulty explaining the creative dimension of metaphor: in particular, the creation of new 'target entities'. In the afterword to the second edition of *Metaphors We Live By* (2003 [1980]), Lakoff and Johnson summarize the progress in the development of CMT since its first presentation in 1980. They recognize that neither the functional principle of mapping across conceptual domains nor the principle of projection explain the creative aspect involved in the creation of new designative target entities. For this reason, they offer a new explanation: a neural theory of metaphor based on the idea of 'primary experiences' – which are neurally grounded and stored in the pre-linguistic mental spaces of one's cognitive unconscious (Lakoff & Johnson 1999). Recent developments in CMT culminate in adopting a 'naturalistic' approach to metaphor (see Zlatev 2011 for a critique).

These explanations seem to me self-defeating, because they leave no possibility for explaining the creative nature of metaphors.

CMT fails to account for the creativity of metaphor in everyday language for at least two reasons. The first concerns the embedding of conceptual metaphor within one's ordinary conceptual system under the guise of well-known conventional metaphor. If one looks carefully at the initial formulation of the theory – specifically, at the functional principle of mapping across conceptual domains – one observes that *mutatis mutandis* CS tacitly adheres to Saussure's claim for the primacy of the system: 'metaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system' (Lakoff & Johnson 2003 [1980]: 4). It is this view of metaphor as pre-given in one's conceptual system that prevents cognitive semanticists from seeing the creative aspect of metaphor. My quarrel with CMT lies in its assumption of the conceptual system's precedence. Lakoff and Johnson's initial intention was to explain the way one conceptualizes experience through metaphor; they assumed a kind of designational process. They failed to achieve their aim because their

research focused mainly on such aspects as the conventionality and systematicity of metaphor, not on their emergence as such.

Specifically, Lakoff and Johnson (2003 [1980]: 252) see conceptual metaphors as 'mappings in the mathematical sense' presupposing a connected situatedness of the two domains, where the source entity and the target share the relevant image-schematic structure. So the TIME IS MONEY metaphor allows inference patterns from the source domain MONEY to be used as a resource in reasoning about the target domain TIME. This says little about the projection from source to target *as a process* (see Zlatev 2011 for a relevant discussion). Lakoff and Johnson treat such conceptual metaphors statically by placing them in what they have called the ordinary conceptual system in line with 'the given system' model – in Coseriu's words, conceiving metaphors as *ergon*, not *enérgeia*. We can conclude that the theory is unable to capture metaphorical creativity *in actus* because conceptual metaphors are seen as independent, pre-existing entities in relation to the activity of speaking.

The second reason CMT fails to explain the creative dimension of metaphor is reflected in Lakoff and Johnson's 1999 formulation of metaphor as neural phenomenon – later refined (Lakoff 2008) as 'neural circuit'. Borcilă (2003: 59; my translation[69]) notices that 'cognitive semantics' attempt to… seek after an "explanation" of metaphor beyond the imaginative activities' involved in primordial linguistic cognition, along with the attempt to situate metaphor 'within a distinct pre-verbal space of "primary experiences"' attests 'a profound misunderstanding of the fundamental creative nature of language' as *enérgeia*. The main error of CS, made most clear by the second version of CMT (Lakoff & Johnson 1999, Lakoff 2008), lies in reducing primary linguistic cognitive creativity to a 'conditioning factor', namely to 'primary experiences' (Borcilă 2003: 59) or, most recently, to 'neural circuits'.

Coseriu's portrayal of the signifying function of language as 'intuitive creation of *signifiés*' (or, simply, his understanding of language as *enérgeia*) and the relation between his concepts of *enérgeia*, *dynamis*, and *ergon* are the least assimilated and least understood dimensions of his thought within contemporary linguistic research, particularly within CL. At the same time, the principle of creativity – defined by the first concept of his crucial triad – provides the best explanatory principle for the activity of speaking as a free cognitive activity. In the particular case of CS, understanding language (and metaphor) as *enérgeia* helps one avoid reducing creativity to something that is not creative anymore: e.g., some biological basis or (primary) experience (Borcilă 2003).

5. CONCLUSIONS

The idea of mapping image-schematic structures from a source to a target domain, with the aim to express abstract concepts in terms of concrete, more clearly delineated ones, remains valuable. Coseriu

[69] 'Tentaţia cognitivistă de... a căuta o "explicaţie" a metaforei vorbirii în afara activităţii imaginative (în spaţiul "experienţelor primare") trădează, în ultimă instanţă, aceeaşi profundă neînţelegere a naturii fundamental creatoare a limbajului'.

(1985 [1952]) argues that metaphorical knowledge is knowledge 'by *images*'.[70] In company with CS, he asserts that, with metaphor, 'we face ourselves with the human being's attempts to classify reality, not through some categories of reason, but rather through images and in the presence of some established analogies, not formally between words, but rather between "visions" that would have been aroused at a specific sequence of time in someone's creative imagination' (Coseriu 1985 [1952]): 95, my translation[71]).

Coseriu's main idea is that all language, at all levels, is creative (see Section 2.3); but the level at which creativity *in actus* can best be studied is the universal one. The study of this creativity *in actus* is the preferred theme of speaking at the universal level, because 'the creative capacity' does not belong to 'cultural, ethnic or linguistic differences'; rather, it reveals 'a certain universal unity of human imagination' (Coseriu 1985 [1952]: 80, my translation[72]). Metaphorical creation in language – conceived in a deeper and broader sense than the rhetorical! – is the privileged dimension for exploring linguistic cognitive creativity.

I propose that IS could add more value to the achievements of CS by describing the mechanism of metaphorical designation: in other words, by investigating the operations of 'the mutual determination of universals'.

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[70] Coseriu's theory of metaphor has been further developed within the integralist studies program in Cluj-Napoca, directed by M. Borcilă. Borcilă distinguishes three semantic levels of speaking: the level of *linguistic signification*, the *representational* level, and the *perceptual-skeological* one. The latter is where the ideas from CS concerning image schemas and directly emergent image-schematic concepts are integrated. Image-schematic concepts structured within CS as conceptual metaphors are reinterpreted as pertaining to the representational level. Johnson's (1987) concept of image schema helps specify that the image involved at the perceptual-skeologic level is not a rich image of a particular object; rather, it has a *gestalt structure* that organizes perceptions of the world into coherent unified wholes of experience. Putting to one side his individualistic bias, one can say that Johnson assumes a Kantian position in stating that image schemas are supposed to exist only in the mind. They are neither psychological phenomena whose role is to organize mental representations into meaningful units nor structures within the cognitive unconscious (Lakoff & Johnson 1999) nor neural circuits (Dodge & Lakoff 2005, Lakoff 2008). Johnson's notion of image schema seems compatible with a phenomenological account and with the IS framework.

[71] 'Nos encontramos frente a intentos de clasificar la realidad, ya no mediante categorías de la razón sino mediante imágenes, y frente a analogías establecidas, no desde un punto de visto estrictamente formal, entre vocablos, sino poéticamente, entre "visiones", que deben haber surgido, en cierto momento particular, de la fantasía creadora de alguien'.

[72] 'El conocimiento lingüístico es (…) un conocimiento mediante *imágenes*, las cuales, además, se orientan tan a menudo en el mismo sentido que nos hacen pensar seriamente en cierta unidad universal de la fantasía humana, por encima de las diferencias idiomáticas, étnicas o culturales'.

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From Cognitive Linguistics to Social Science: Thirty Years after *Metaphors We Live By*

In the thirty years since the appearance of *Metaphors We Live By*, cognitive linguistics has developed into a flourishing autonomous branch of inquiry. Interdisciplinary contacts, however, have largely been restricted to literary studies and the cognitive sciences and hardly extended towards the social sciences. This is the more surprising as, in 1970s anthropology, metaphor was seen as a key notion for the study of symbolism more generally. This contribution explores the cognitive linguistic view of social and cultural factors. Lakoff and Johnson appear ambivalent regarding the relation between culture and cognition; but they share the belief, elaborated in detail by Gibbs and Turner (2002), that cultural factors can be accounted for in terms of cognitive processes. This view runs into both methodological and philosophical difficulties. Methodologically, it assumes that cultural factors can be reduced to cognitive processes; philosophically, it boils down to a Cartesian emphasis on inner experience explaining outer phenomena. There are substantial anti-Cartesian strains both in contemporary philosophy and in a major current of Eighteenth-Century philosophy. The latter, in particular, emphasized the importance of embodiment and metaphor in cognition. As an alternative, I will sketch a more consistently semiotic- and practice-oriented approach that proceeds from linguistic practices to cognitive processes rather than the other way around. It takes practices as irreducibly public and normative; on this approach, so-called linguistic ideologies (Silverstein 1979) play a constitutive role in both linguistic practice and language structure. This alternative builds on recent developments in linguistic anthropology and the work of Peirce and Bakhtin. It suggests a different look at the relation between cognition, language, and social practice from that suggested in cognitive linguistics.

1. INTRODUCTION

The 1980 appearance of George Lakoff and Mark Johnson's *Metaphors We Live By* (henceforth *MWLB*) marks the beginnings of cognitive linguistics: a research paradigm that has seen tremendous growth over the past three decades. Characteristic of this paradigm is a fruitful interdisciplinary cooperation with – among others – departments of literature and cognitive science. Yet, there is a remarkable one-sidedness to this interdisciplinary blossoming: one sees little if any substantial exchange or collaboration between cognitive linguistics and the social sciences.

This lack of contact is all the more surprising as, in the late 1970s, metaphor appeared to become the master trope of symbolic and cognitive anthropology: thus, in 1974, James Fernandez argued that metaphor is the key figure – or master trope – of symbolic anthropology. However, by the early 1990s – in a volume significantly entitled *Beyond Metaphor* (Fernandez 1991) – he suggests that the study of

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tropes should look beyond this particular figure; and later research in anthropology seems to have shifted even further away from the study of metaphor in particular and tropes in general.

In this paper, I try to explain why this once-promising line of interdisciplinary research was not pursued more ardently, or with more lasting success, in the following decades. I do so, first, by discussing methodological considerations on the relative priority of cultural and cognitive factors in *MWLB* and several of Lakoff and Johnson's later works, as well as more recent studies by Ray Gibbs and Mark Turner. Next, I supplement these methodological considerations with a more strictly philosophical argument that is both systematic and historical in character. The systematic point is that there are serious philosophical challenges to the – ultimately Cartesian – picture assumed by cognitive semanticists. The historical point is that, in Western philosophy, there *is* a tradition that takes both figurative language and the impact of social practices on cognition seriously; strangely, Lakoff and Johnson pass over this tradition in silence.

2. COGNITION AND CULTURE: METHODOLOGICAL ASSUMPTIONS

Culture does not loom large in *MWLB*. This should be no cause for surprise, given the emphasis on cognitive processes implicitly assumed to be universal. The concept of culture plays no major explanatory role in Lakoff and Johnson's theoretical framework: culture is not a supporting member of the theoretical architecture of cognitive linguistics. Yet, here and elsewhere, Lakoff and Johnson present – or rather, presume – a substantial notion of culture. It is worthwhile to tease out these tacit assumptions and see how they relate to social-scientific discussions.

First, they tend to relegate cultural variation to the status of a mere surface phenomenon that has no important influence on cognitive processes. In their brief remarks on metaphor and cultural coherence (*MWLB* Ch. 5), they appear to argue that, despite the different values attached to MORE–LESS, UP–DOWN, and other orientations, both the experiential base and the metaphorical processes involved are cross-culturally identical: 'the major orientations up-down, in-out etc.… seem to cut across all cultures, but which concepts are oriented which way and which orientations are most important vary from culture to culture' (1980: 24). Although the experiential base is the same, these different orientations may be evaluated differently; but all the metaphorical projections are based on the same cognitive processes. Put differently: although the *content* of particular orientational metaphors and valuations of up-down, left-right etc., may vary across cultures, the *structure* of the metaphorical mappings with which spatial experience maps onto more abstract domains is universal.

Second, Lakoff and Johnson assume that cultures operate in terms of shared conceptualizations and shared norms and values. They speak repeatedly of the conceptual metaphors of 'our culture' and 'our society' (e.g., 1980: 22) without specifying how either is delimited: American, Anglosaxon, Western, or what? Are they bounded by language or by other factors?

These conceptions do not change in later writings. Thus, in *Women, Fire, and Dangerous Things* (1987; henceforth *WFDT*), Lakoff does not develop or qualify his conception of culture as shared. Neither does he clearly analyze, distinguish, or contrast the cultural and natural aspects of the world within which individual organisms function. As a result, his chapter on relativism displays a profound ambivalence between seeing culture as merely expressing – ultimately universal – deeper cognitive realities and seeing it as actually shaping or even constituting thought. Likewise, in (2001), he mostly talks about culture in terms of romantic and organicist notions of shared traditions, norms, and values: thus, he sweepingly characterizes 'Islamic culture' as involving 'values' radically different from 'our' culture. This claim is not only factually wrong, but conceptually problematic: here and elsewhere in his writings, Lakoff uncritically reproduces a romantic and ahistorical notion of culture as timeless and anonymous, involving shared norms and values. His 'culture' concept can be called communitarian, insofar as it presumes cultural communities as given. The question for social scientists to answer, however, is precisely how such communities are created, and how they either sustain themselves or are transformed? A related question is, who can legitimately claim to represent a culture or determine which conceptions and values are shared by – or even constitutive of – that community? In his discussions of conceptual and cultural relativism, Lakoff appears to presume the domains of language, thought, and culture as three distinct entities. The separation of these domains, however, requires a substantial process of purification that is relatively recent and by no means uncontested (Bauman & Briggs 2003: Ch. 8). The very conception of culture presumed by Lakoff and Johnson as self-evident or unproblematic is surprisingly recent: the term *culture* did not get its currently widespread meaning until around 1800.

Thus, the 'culture concept' assumed in cognitive linguistics appears to be thoroughly romantic and communitarian. However, perhaps one should not belabour the problems with and shortcomings in Lakoff and Johnson's views; but rather, more constructively, ask how cognitive-linguistic approaches could be extended or modified to accommodate a more sophisticated view of the complexities of human culture and society: more specifically, to accommodate the findings of social sciences. Gibbs (1999) offers a brief, programmatic attempt and Turner (2002) a more detailed argument in this direction. Let us consider both in turn.

Gibbs acknowledges that cognition arises from interaction between embodied mind and a cultural – not just physical – world. He argues that cognitive linguistics should be extended to accommodate these cultural aspects; but he stops short of drawing the more radical conclusion that cultural factors, interacting with embodied cognition, may be at least partly *constitutive* of the latter. Of course, such a view would lead to radical questioning of the idea of 'basic-level concepts' as not only a non-metaphorical foundation for cognition, but directly meaningful and intrinsically intentional (*cf*. Lakoff 1987: 267). This view runs afoul of the crucial – probably irreducible – cultural component in such allegedly basic-level concepts as CHAIR and MOTHER. Chairs are obviously cultural artefacts, and mothers are not simply biologically given, but – to an important extent – socially constituted.

Motherhood, like kinship relations more generally, involves a distinct social role and a distinct social status that may vary widely across cultures. Like all kinship relations, it is cultural as much as biological. The assumption that these biological dimensions are prior is both theory-driven and debateable, not self-evidently true.

Mark Turner (2002) attempts to present cognitive linguistics as a foundational auxiliary science for the social sciences, giving a cognitive twist to Clifford Geertz's interpretive approach to anthropology – which already heavily employs concepts and methods from literary theory and philosophy, in particular semiotics and hermeneutics. Echoing Max Weber, Geertz argues that human behaviour is a form of symbolic action; the anthropologist's or sociologist's task is to explicate the social meanings of the symbols involved. To mention one famous example, the Balinese cockfights explored by Geertz (1973) tell something deep about Balinese culture. The violent cockfight functions as a peaceful – indeed playful – enactment of rivalries or hostilities between kin groups and villages or even, on a broader stage, between the islands of Bali and Java.

Turner argues that these cultural meanings are generated by the basic cognitive operation of what he calls *blending*. Social science 'looks at meanings all the time, but not at the problem of meaning' (2002: 10): that is, it presumes the existence of meaning as an explanatory entity, rather than exploring how it comes about as a feature – or result – of people's biological, cultural, and social makeup. It is here that cognitive linguistics can help, he claims, as it sets out to account for meanings as the result of basic mental – hence, biologically endowed – operations. He identifies blending, rather than the earlier notions of conceptual metaphor and conceptual mapping, as the central and universal process generating the meanings involved in social action.

Much of Turner's book reads like a cognitivist gloss on Geertz's interpretive approach to social science. It attempts to account for the social-scientific preoccupation with questions of meaning and culture in terms of a cognitive-scientific preoccupation with mind and brain, and meaning in terms of conceptual metaphors, idealized cognitive models, mappings, and blendings. It explains cultural particularity and historical specificity in terms of a 'mental ability that is permanent, indispensable, and apparently universal to human beings' (2002: 20). In doing so, however, Turner risks wholly *reducing* social action to underlying biological and mental processes. As I will show, there are good philosophical as well as methodological reasons to resist this reduction. Apart from the question how much these allegedly universal operations and basic-level concepts are, in part, culturally shaped or constituted, this reduction leaves unanswered the question whether and how cultural practices – inherently public and normative – can be explained by, and reduced to, mental processes that are purely causal and private. The problems with reducing public to private and normative to causal are of both a philosophical and logical nature.

One can take such a practice-theoretical perspective as no more than a methodological choice that may, or may not, lead to new insights. It need not be read as making any substantive claim about human cognition. So the question is whether this perspective leads merely to new insights, or to

empirically more plausible incorporation of cultural factors into a cognitive account. As I noted above, authors within a cognitive paradigm start with the 'inner', from which they try to extend or extrapolate to the outer, cultural world (see e.g. Gibbs 1999). One might just as well proceed in the opposite direction, taking linguistic and other public practices as constitutive of mental structures, not the other way around. In taking such a 'practice turn' concerning language use, one need not commit oneself to any substantial philosophical or psychological claims about the character of human thought. Viewing the line of inquiry as no more than a methodological choice, one may explore the questions and insights it leads to. The idea that linguistic practices may be constitutive of cognitive processes should be distinguished, of course, from the 'objectivist' view that metaphor is a purely linguistic phenomenon with no cognitive import – even though the latter claim, like the former, seems to elevate the level of linguistic expression above that of cognitive processes. A practice-theoretical approach can well accommodate the idea that social practices – and, hence, cognitive processes – are embodied.[1] Likewise – perhaps most importantly – the practice turn in the social sciences rejects the idea of cultures as scripts to be enacted. This leads to a more realistic and empirically informed view of how culture functions.

More substantial arguments may be raised against Gibbs and Turner, however. Both – indeed, cognitive linguistics in general – appear to share the presumption that meanings are primarily private mental entities and only secondarily – or derivatively – social or public phenomena. This presumption has come under increasing attack from Twentieth Century philosophers; it is surprising, to say the least, that Lakoff and Johnson nowhere address such lines of criticism.

3. LAKOFF AND JOHNSON'S CARTESIAN FOUNDATIONALISM

I propose having a closer look at some of the systematic philosophical considerations concerning a cognitive account of metaphor. Previous authors have objected to the way Lakoff repeatedly resorts to straw-man arguments in discussing earlier philosophical theories of metaphor; but that is not my main concern. Neither am I concerned with the overly sweeping opposition that Lakoff and Johnson create between an 'objectivism' that allegedly believes in an objective reality and objectively given meanings – meanings that can be characterized without appeal to embodied human cognition or conceptual metaphor – and a romantic 'subjectivism' that allegedly treats inner embodied experience as purely individual, subjective, and unconstrained (*MWLB* chapters 25-28). My focus will rather be on the relationship between Lakoff and Johnson's approach and some of the most forceful anti-Cartesian arguments in Twentieth-Century philosophy.

Despite the so-called 'linguistic turn' in Twentieth-Century analytic – and, in a rather different way, Continental – philosophy, for a long time Anglo-Saxon philosophers had little to say about

[1] Although the point is not made very emphatically in *Philosophical Investigations*, one can construe the later Wittgenstein as arguing that language games are not only public but also embodied practices.

metaphor. It was not until the 1960s that analytically trained philosophers like Max Black, Monroe Beardsley, and H.P. Grice started taking metaphor seriously. Analytic or 'objectivist' philosophy tended to reject metaphor as mere stylistic embellishment with no cognitive import. At least as problematic is the analytic tendency to relegate metaphor to the domain of language use rather than linguistic meaning – as was done by Searle, Grice, and Davidson in particular.[2] In *MWLB* and later works, Lakoff and Johnson focus on the formalist strain in analytic philosophy and its offshoots in formal semantics, as represented by e.g. Quine, David Lewis, Saul Kripke, and Richard Montague. Despite their often one-sided and exaggerated depictions – on occasion, downright caricatures – of these authors, Lakoff and Johnson's criticism of what they call 'objectivist' semantics – in particular, the tacit assumption among many analytical philosophers that literal meaning is unproblematically given – is largely justified.

However, another strain in analytic philosophy is both more relevant and more threatening to the entire cognitive-linguistic undertaking. This is the more informal, anti-Cartesian current that explains language and knowledge in terms of public or social practices, represented by e.g. the later Wittgenstein and by 'ordinary language' philosophy. It rejects the classical empiricist claim that abstract conceptual knowledge rests on – and can be reduced to – purely non-conceptual, direct causal interaction with the world through the organs of perception, but also attacks the rationalist, Cartesian form of 'foundationalism'. Consideration of Lakoff and Johnson's arguments suggests that their cognitive paradigm remains bound to the main tenets of – and so runs into the same problems as – Cartesian foundationalist epistemology.

The question is less whether cognitive linguistics is more Cartesian rationalist or Locke-style empiricist in character and more how far Lakoff and Johnson reproduce the foundationalist assumptions inherent in both approaches: foundationalism in both its rationalist and empiricist guise has come under increasing attack in Twentieth-Century philosophy. Of course, the most famous attack on any Cartesian reduction of public language use to private mental states is Ludwig Wittgenstein's discussion of mental states as explanations for linguistic meanings: in particular, the private-language argument in *Philosophical Investigations* (1953: §139-202). Meanwhile, the empiricist assumption that conceptualized knowledge states – inherently normative, because they involve correct or incorrect beliefs, propositions, and states – can be reduced to purely causal interaction with the world finds forceful criticism in (Sellars 1956). Taken together, Wittgenstein's and Sellars' claims amount to the suggestion that linguistic practice is irreducibly public and normative; it cannot be explained by, or reduced to, mental states, which are inherently mental, private, and causal. Instead, the order of explanation should be reversed.

Discussion of the private language argument – along with other philosophical challenges to Cartesian epistemology – is strangely absent not only from *MWLB* but also from later works like

[2] See (Leezenberg 2001), especially sections 2.2 and 2.3, for an extensive criticism of this attempt.

WFDT and *Philosophy in the Flesh* (1999; henceforth *PIF*). Even Lakoff and Johnson's discussion of analytic philosophy in *PIF* (Ch. 21) focuses on Quine's alleged belief in a 'world made up, objectively, of entities, including the natural kinds' (1999: 451), along with Kripke's causal theory of reference and Montague grammar. Quite apart from whether they represent these approaches adequately, their neglect of Wittgenstein's discussion of language games and rule-following as public practice, and their neglect of his private-language argument – highly relevant to their Cartesian project – is startling. This is all the more surprising given that Wittgenstein's private language argument, especially as interpreted by Saul Kripke, became one of the most hotly debated topics in analytical philosophy of the 1980s and '90s.

Equally surprising is Lakoff's one-sided reading of (Putnam 1981): Lakoff uses Putnam's famous model-theoretic argument in Chapter Two as a stick to beat all forms of model-theoretic semantics (*WFDT*, Ch. 15), but he completely ignores Putnam's (1981: 17-21) summary dismissal of human intentionality as a means of fixing reference – even though that is precisely what Lakoff's assumption of 'directly meaningful embodied experience' amounts to. In other words, the very line of epistemological argument that Lakoff employs against 'objectivist' semantics threatens his own embodied realism. The underlying reason is not hard to find. Lakoff and Johnson's experientialism – what they later call 'embodied realism' – accounts for matters of knowledge in terms of an individual mind confronting the outside world, based on a residual Cartesianism that runs into all kinds of sceptical problems. Although they give a phenomenological twist to their Cartesian program – one that supplements or replaces Descartes' emphasis on the faculty of reason with an inquiry into embodied non- or pre-rational experience (what more daring French philosophers have called 'the unthought') – they remain within a Cartesian framework insofar as they account for cognition in terms of individual, inner mental processes rather than public and normative linguistic practices.

Criticism of this Cartesian 'objectivism' – if that is the right term – is not new. Indeed, the general thrust of recent analytical philosophy has been to treat language use as holistic, public, and irreducibly normative practice: that is where things stood by the late 1970s, and where they still stand today. Of course, Cartesian rationalism has also been criticized by the phenomenological tradition. In *MWLB* and again in *PIF*, Lakoff and Johnson acknowledge Merleau-Ponty and – to a lesser extent – John Dewey as precursors to their own embodied realism; but they do not explicate this ancestry in any detail. Meanwhile, the subsequent practical turn goes beyond the phenomenological project, which – at least in Merleau-Ponty's formulation – remains within broadly Cartesian confines.

In short, Lakoff and Johnson's ultimately Cartesian approach to metaphor and embodied cognition places them much more in an outdated European philosophical tradition than they realize. Despite their wholesale rejection of the 'Western philosophical tradition' for being objectivist, they take insufficient distance from it: their position and its subsequent elaborations are recognizably Cartesian, treating cognition as a confrontation between individual mind/brain and outside world – a world, moreover, that is primarily physical and natural and only secondarily social and cultural. In

attempting to reduce all conceptual and normative questions of knowledge and its justification to a level of non-conceptual, embodied experience of one's causal interaction with the outside world, cognitive linguistics appears to rely on what has been called a foundationalist epistemology.[3]

I will argue that an alternative account emphasizing the embodied and originally figurative character of human language usage was already available in the Eighteenth Century. The Western philosophical tradition is not so monolithically objectivist as Lakoff and Johnson's sweeping – dare I say Heideggerian? – characterization suggests.

4. METAPHOR IN THE HISTORY OF PHILOSOPHY: EMBODIMENT IN THE ENLIGHTENMENT

Lakoff and Johnson's line of argument is very much shaped by romantic oppositions such as those between reasoned and felt, subjective and objective, inner and outer. In *MWLB* chapters 25-29, they claim to transcend the distinction between an objectivism informed by Enlightenment rationalism, scientificity, and objective validity on the one hand and an unconstrained Romantic subjectivism that rejects objective science in favour of purely individual, subjective, irrational experience on the other. They present experientialism – what they elsewhere call 'embodied realism' – as a means of going beyond both; yet their positive valuation of metaphor and their rejection of scientific objectivism remain very much in the tradition of a Romantic reaction against Enlightenment rationalism.

However, an anti-Cartesian view emerged within later Enlightenment thought that emphasized the importance of public language, metaphor, and embodiment – against a widely held stereotype, Enlightenment thought is neither uniformly rationalist nor objectivist. This tradition was eclipsed by later philosophical developments: most notably, the emergence of Kant, Hegel, and German idealism; but, in its time, it enjoyed widespread influence and popularity. Most importantly for my purposes, it rejected Descartes' individualist and mentalist rationalism and Locke's view of human languages as at best an imperfect approximation to or expression of pure, correct thought. Locke rejects figurative language for the same reason he rejects rhetoric more generally: both work on the passions rather than reason. He famously concludes his discussion of what he calls the rhetorical abuse of words thus: 'eloquence, like the fair Sex, has too prevailing Beauties in it, to suffer it self ever to be spoken against. And 'tis in vain to find fault with those Arts of Deceiving, wherein Men find pleasure to be Deceived' (1975 [1689]: 508).

In the early Eighteenth Century, an alternative view emerged of both language in general and tropes in particular. It saw poetry as the original, or primitive, form of language; emphasized the embodied character of this primitive poetic language; and hence made metaphor, along with other

[3] Undoubtedly, the first systematic critique of foundationalism was (Sellars 1956), with its unrelenting attack on the so-called 'Myth of the Given'. It was restated and elaborated forcefully by the likes of Donald Davidson (1984 [1973]) and Richard Rorty (1979). As formulated by Lakoff, cognitive linguistics appears vulnerable to criticism along the lines of Davidson's famous rejection of conceptual schemes.

poetic figures, crucial to the development of language and thought. Its most famous representative is Giambattista Vico who, in his *Scienza nuova* (1744), famously argues that primitive nations speak and think fundamentally differently from advanced, literate societies; they speak and think in terms of what he calls 'poetic characters'. To the modern mind, these are poetic metaphors and other figures of speech; but, for the most ancient nations, they were the natural – indeed, the only possible – way to express themselves. This poetic speech reflects qualitatively different ways of thought: ancient nations, Vico argues, think in terms of imaginative universals rather than abstract concepts.

In the literature, Vico is usually – but mistakenly – pictured as a lone genius standing outside the Cartesian mainstream of Western European philosophy or Enlightenment thought. In fact, anti-Cartesianism was widespread across Europe. Thus, Hans Aarsleff argues (2006: 451) that ' the tenor of eighteenth-century philosophy was anti-Cartesian, and the primary vehicle of this reaction was the philosophy of language'. Surprisingly, he does not discuss Vico's rejection of Cartesianism; but, in truth, this omission shows that, during this period, the critique of Cartesian mentalism and of the rejection of language as mere distraction from or distortion of adequate knowledge was widespread indeed. Historically, the most widely influential of the anti-Cartesian critics was undoubtedly Jean-Jacques Rousseau, who briefly describes (1755) the origin of language in quasi-poetic expression involving metaphorical projections. That said, probably the more important author spreading – if not initiating – this conception of 'primitive' language as poetic was Étienne Bonnot de Condillac, whose 1746 *Essai sur l' origine des connaissances humaines* – though largely forgotten today – exercised tremendous influence in the Eighteenth Century. Thus, it shaped the ideas of Johann Gottfried Herder – most importantly his early essay on the origin of language and his later works on the oral poetical traditions of primitive, generally illiterate peoples. It is impossible, Condillac argues, to separate music and poetry from the most ancient forms of language (2001 [1746]: 139), adding that 'if prosody at the origin of languages was close to chant, then… the style was a virtual painting, adopting all sorts of metaphors' (2001: 150). Only at a later stage in the development of language does eloquence turn into ornament and poetry into art. All abstract terms are figurative in origin (2001: 164-165): a line of thinking close to – but probably developed independently from – Vico's.

At first blush, all this might well seem to anticipate the main tenets of cognitive linguistics. However, Condillac's argument differs on two crucial points: not only does he argue that figurative names of complex ideas are created before those of simple ideas (2001: 167), he also argues that the social practice of language use shapes mental operations, rather than the other way around. 'Social intercourse gives occasion to change the natural cries into signs… and these signs are the first principles of the development and progress of the operations of the mind' (quoted by Aarsleff 2006: 463). Public language use is, itself, constitutive of thought. Condillac's *Essai* is often seen as little more than a French-language abbreviation of Locke's *Essay Concerning Human Understanding*. In

fact, it expresses quite different doctrines concerning the role of language in thought and of metaphor and other figures in communication.[4]

The arguments pursued by Condillac, Vico, and others make it possible to see cognition as mediated – if not constituted – by the use of symbols; metaphor plays a crucial role in this process of linguistically mediated and practically constituted cognition. They represent a historically significant philosophical tradition suggesting that public use of language is constitutive of inner mental thought rather than *vice versa*.

5. COGNITIVE MODELS AND LINGUISTIC IDEOLOGIES

Of course, this leaves open what a practice-based or -oriented account of metaphorical mappings and cognitive models emphasizing public practice over private representation would look like. I have no space to provide such an account in any detail, but I will venture a few initial remarks. First, it must treat categorization and literal meaning as variably linked to particular literate and oral practices. It identifies writing as one factor significantly contributing to the stabilization of literal word meanings through a process of codification in dictionaries and works of grammar. It focuses on education as a crucial variable in cognition, suggesting that specific kinds of learning – e.g., modern education as opposed to oral transmission of knowledge or more traditional forms of education based on rote learning – will have differential cognitive effects.

Second, it should open up cognitive analyses for questions of social authority and power. The successful fixing of literal word meanings in dictionaries – along with the reproduction of linguistic practices in and through education – presupposes a legitimate linguistic and cognitive authority. At present, this entire thematic of power in the literal-figurative distinction is virtually unexplored.

Third, it should give central place to linguistic ideologies: i.e., folk models about what words are and how they function in the social world – much like what Lakoff calls *cognitive models*. However, there is an important analytical difference: linguistic ideologies are public rather than private representations; they are primarily linguistic rather than cognitive entities; they are not only culturally specific but generally indicative of class, status, and power. They have also an important – if not irreducible – indexical dimension.[5]

The crucial insight is that metaphor does not generally involve decontextualized conceptual mapping but is context dependent. In recent years, more attention has come to be devoted to metaphor as a discourse phenomenon – argued for, along rather different lines, in both philosophy (Leezenberg 2001: 217-239) and applied linguistics (Cameron & Deigman 2006).[6] The Romantic reappraisal of

[4] For more details, see Aarsleff's introduction to his translation of the *Essai*, especially pages xv-xvii.
[5] For more detailed discussion of linguistic ideologies and their importance to explanation of linguistic practice, see e.g. (Bauman & Briggs 2003: Ch. 1, Hanks 1996: Ch. 10).
[6] I make a few preliminary explorations of the role of linguistic ideologies in metaphor – and, more generally, the role of metalinguistics – in (Leezenberg 2008), especially pages 18-21.

metaphor presupposes a separation, or *purification*, of the domain of literal language as fact: a purification not achieved until the Seventeenth Century (Bauman & Briggs 2003: Ch. 2).

Lakoff has claimed (1993) that Michael Reddy anticipated cognitive science. Reddy himself believes that what he calls the 'conduit' metaphor – the idea of language as a vehicle for expressing and transporting thought – is not a mental model but a public ideology: a linguistic feature of English in its function as its own metalanguage, commenting on its own status and functioning (1993 [1979]: 165-166); he argues against mentalist-cognitive approaches to language like Lakoff and Johnson's. The conduit metaphor should be seen as linguistic ideology rather than cognitive model. Reddy emphasizes its public and contested character: witness his raising the 'question to what extent language can influence thought processes' (1993: 175). Reddy argues for virtually the opposite of what Lakoff takes him to say: he discusses the formative influence of language on cognition rather than the linguistic realization of conceptual structures assumed to be universal and explanatory. His is a normative approach; he argues that the view of language as a vehicle for the expression and transmission of thoughts is misleading. Strangely, Lakoff and Johnson nowhere address how far their cognitive approach – which, at the very least, appears to presume aspects of the conduit metaphor – rests on a potentially misleading framing of language as merely derivative of thought.

One final question to raise is why the study of metaphor – and, perhaps, tropes more generally – disappeared so suddenly from anthropology. I have no good answer; but this disappearance seems to have happened in conjunction with the gradual eclipse of cognitive and symbolic approaches. Like symbolic anthropology, the cognitive linguistic paradigm takes cultures as systems of knowledge or as scripts or texts to be executed or implemented. In recent years, cognitive and symbolic approaches in anthropology have largely been sidelined by what one might call a 'practical turn'. Nowadays, anthropologists study embodied public practices rather than embodied private mental processes.

The key development may have been the gradual emergence of linguistic anthropology during the 1980s and '90s. This sub-discipline, distinguishing itself both from social and cultural anthropology and from linguistics, is of a semiotic rather than cognitive orientation, inspired less by Weber's interpretive social science, which crucially informed Geertz's approach to anthropology, than by early, non-structuralist authors like C.S. Peirce and Mikhail Bakhtin writing on signs and linguistic practice. Within this framework, more attention tends to be given to societal questions of language use, power relations, and public ideologies rather than linguistic structure, conceptual relations, and mental models. Questions of linguistic and conceptual structure fade into the background in favour of questions of what language users do – and believe – in qualifying linguistic items or speech genres as e.g. poetical or metaphorical. These questions point to the considerable – historically and culturally variable – amount of work that must be done to construe, or *purify*, such apparently self-evident domains and categories as those of language, culture, 'the literal', 'the poetical', etc.

6. CONCLUSION

Despite cognitive linguistics' unmistakeable successes, its cognitive conception of culture remains unsatisfactory, resting on implicit, outdated Romantic assumptions rather than any empirically informed, theoretically sophisticated account of how culture is produced, sustained, and contested. One way to begin to remedy this might be to extend cognitive linguistic conceptions to the sphere of cultural practices, as Gibbs and Turner have attempted; but this does not resolve the underlying conceptual problems. It also rests on a kind of anthropology that is largely outdated. In many respects, Lakoff and Johnson have a thoroughly Romantic conception of metaphor. In other respects, however, their account of cognition as embodied and experiential rests on an assumed Cartesian picture, which still takes cognitive processes to be explainable in terms of individual – ultimately private – bodily experience, rather than public – and possibly embodied – practice.

Another solution is to explore the relation between cognition and culture the other way around: i.e., to explore questions of cognitive processes and conceptual mappings via a more properly semiotic approach that takes human cognition as mediated – if not partly constituted – by use of symbols. Such an approach that focuses on linguistic practices understood as inherently public, normative, and power-saturated, can be taken either as a substantial philosophical claim or as no more than a methodological choice. Its claim that public language use is constitutive of private mental states rather than the other way around should not be mistaken for the 'objectivist' view that metaphor is merely a linguistic device without cognitive import. It has a venerable philosophical pedigree, traceable not only to Twentieth-Century philosophers like Wittgenstein and social theorists like Bourdieu and Foucault, but also to earlier thinkers like Vico, Condillac, and Herder.

Of course, the big open question is whether – and, if so, to what extent – metaphor remains relevant for linguistic anthropology and other social sciences; and, conversely, whether the social sciences after the practical turn still have anything interesting to say about metaphor or conceptual organization in general. One would hope for an answer in the affirmative; but, if so, at this stage it would express a wish rather than a conviction.

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CMT and the 'Work' of Metaphor

I propose to show that, in their Conceptual Metaphor Theory (CMT), Lakoff and his collaborators do not offer a new account of metaphor but rather a wide-ranging representation of analogies, reconstructed on the basis of selected linguistic material (primarily collocations and idioms). Consequently, CMT is valuable not as an explanation of metaphorical language in use, nor a hypothesis about the genesis and development of concepts in individual minds, but primarily as a way to represent the results of unexplored social processes of lexicalization involving metaphor. If one adopts a more 'ecological', situated perspective, this global, *post hoc* approach may perhaps provide useful material to speculate on the forces that drive meaning extension in history.

Keywords: conceptual metaphor, analogy, concept formation, blending, linguistic mentalism, stereotype, primacy of metaphor.

1. INTRODUCTION

As Black points out (1962: 28-29), '"metaphor" is a loose word, at best, and we must beware of attributing to it stricter rules of usage than are actually found in practice'. Black's point concerns a specific issue: differentiation of similar metaphors in discourse; but it may well be extended to any phenomena that go by this name. Whenever one wants to say something specific about the nature of metaphor, one should try to keep in mind the full range of entities labeled 'metaphorical' and place one's view within this wider horizon (see Section 5 for a sketch of this range). Black's advice is especially pertinent when one undertakes to define metaphor in a way that is strikingly different from standard usage and, at the same time, aims to revolutionize the whole field of metaphor research, as is the case with Lakoff and Johnson's proposal. It seems imperative then to relate their claims to traditional attempts that probe metaphor from different sides. I believe that Lakoff – the *spiritus movens* of the whole enterprise,[1] who has repeatedly underlined its importance – did not pay enough attention to this necessary aspect of metaphor research, possibly because he was convinced of

[1] Lakoff's further cooperation with Johnson centred on their philosophical position called 'experientialism' or 'embodied realism' (Lakoff & Johnson 1999, 2002). Regarding metaphor – before veering towards a neuronal account (Lakoff 2008a: 17-38), which is outside the remit of this paper, Lakoff cooperated with e.g. Kövecses (Lakoff 1987a – the case study of 'anger'; *cf*. Kövecses 1986, 1988, 1990), Brugman (Lakoff 1987a – the case study of 'over'), and Turner (Lakoff & Turner 1989).

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discovering an empirical way to explore the phenomenon: a stance not uncommon in science.[2] In this paper, I would like to fill the gap – so far as my competence allows – and find a place within the field for Lakoff's view on metaphor, in the process reinterpreting his description of the project and its findings. I will focus on the cognitive importance of metaphor, as this aspect plays a central role in Lakoff's account. If my approach is adversarial at places, I submit that it is motivated not only by an intention to dispel the rhetoric surrounding CMT but also to give due recognition to Lakoff and his collaborators' legitimate achievements.

From the start, the new approach to metaphor – first formulated by Lakoff and Johnson in 1980 and subsequently developed as Conceptual Metaphor Theory or CMT (Lakoff 1987, 1993) – was presented not only as an empirical breakthrough in the domain of metaphor research, but also as a revolutionary account of meaning, potentially transforming numerous disciplines. The latter claim was substantiated in several book-length accounts: e.g., (Johnson 1987, 1993; Lakoff 1996; Lakoff & Johnson 1999; Lakoff & Núñez 2001); but, to the best of my knowledge, it has not evoked any significant response in the fields meant to be transformed: ethics, social theory, philosophy, mathematics. The former claim, on the contrary, has been greeted with great enthusiasm and inspired a veritable flood of publications (for references, see Gibbs 1994, 2008; Gibbs & Steen 1999). I believe that both claims are wildly exaggerated. I will not tackle here CMT's theory of meaning, which invites direct comparison to the 'embodied' conceptions of Merleau-Ponty and other hermeneutic phenomenologists[3] (see McLure 1990, 1993 for critiques of this kind[4]). My aim is to show that, if CMT is valid, it is valid in a different way than proposed by Lakoff and Johnson: it may offer a summary representation of a social history of linguistic articulation involving metaphor. Against the background of traditional metaphor research, I will look for a defensible interpretation of what I take to be – at the level of foundational assumptions – an exercise in mentalist rhetoric.[5]

I start my discussion with a description of how the project initiated by *Metaphors We Live By* may be seen either as deeply ambiguous or as catering to opposing expectations: a fact that probably doubled its impact. In Section Three, I argue that the project is *not* based on empirical discovery

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[2] The only extended discussion of traditional views may be found in (Lakoff & Turner 1989: 110-136). Unfortunately, it takes the form of a critique of what are, from CMT's perspective, 'mistakes'.

[3] An open invitation to place Lakoff and Johnson's work in this context may be found in *Philosophy in the Flesh*, where they seem to suggest that they are continuing Merleau-Ponty's work (Lakoff & Johnson 1999: xi). Since they proposed from the start to revise 'central assumptions in the Western philosophical tradition' (Lakoff & Johnson 1980: x) by relying on the notion of embodiment (e.g., Johnson 1987), such a comparison seems necessary. A general critique of this kind may be found, in Polish, in (Pawelec 2005); (Pawelec 2009a) opposes cognitive and hermeneutic approaches to linguistic meaning, with a focus on prototype models. Cazeaux (2007: Ch. 3) offers a sympathetic assessment of Lakoff and Johnson's account of metaphor, underlining its similarities to Merleau-Ponty's project, though, in my opinion, he does not stress enough the differences, especially in view of Lakoff and Johnson's revolutionary philosophical claims.

[4] Leezenberg (2001:135-147) and Haser (2005) offer more 'Wittgensteinian' critiques, raising philosophical issues while focusing primarily on CMT. Haser has a lot to say about Lakoff's argumentative strategies (see also Jäkel 1997).

[5] Chomsky (e.g. 1966) developed the notion of 'linguistic mentalism': the idea that language is primarily a mental phenomenon. Lakoff, who repeatedly distances himself from Chomsky, shares this basic assumption (see Section 3; also Pawelec 2007).

involving linguistic evidence. In Section Four, I try to show that the definitions of conceptual metaphor that Lakoff and Johnson offer do not cover metaphorical phenomena; I propose that CMT should be understood primarily as a (highly) speculative empiricist theory of meaning extension rather than a theory of metaphor. To corroborate my view, in Section Five I reverse their *post hoc* perspective, starting from the phenomena to discuss the different types of 'work' performed by metaphor. In Section Six, I suggest reinterpreting CMT's results. I added the final section, Section Seven, in response to reviewers' comments. There, I briefly present a general and systematic account of the work of metaphor, following (Prandi 2004); and, from a hermeneutic perspective, tentatively probe a fundamental issue that may be labeled 'the primacy of metaphor'.

2. AN AMBIGUOUS AGENDA

Apart from the title, several indications in *Metaphors We Live By* suggest that Lakoff and Johnson subscribe to the Romantic view of metaphor, according to which metaphor is not merely linguistic ornament but 'the omnipresent principle of language' (Richards 1965: 92).[6] This position was famously articulated by Shelley, to be revived by Richards:

> [Their] language is vitally metaphorical; that is, it marks the before unapprehended relations of things and perpetuates their apprehension until words, which represent them, become, through time, signs for portions or classes of thought instead of pictures of integral thoughts: and then, if no new poets should arise to create afresh the associations which have been thus disorganised, language will be dead to all the nobler purposes of human intercourse (Richards 1965: 90-91; Shelley 1821: Sentence 22).

The initial pronoun 'their' refers to 'poets, in the most universal sense of the word' (Sentence 21). Later, Shelley specifies (Sentence 25): 'in the infancy of society every author is necessarily a poet, because language itself is poetry'. The conception of 'poetic origins of language' involving metaphor may seem extravagant; I will return to this at the end of my paper. Here, it is enough to note that, in the Romantic view, culture is to be perceived as a field of continuous struggle between the forces of ossification (everyday use of language) and renewal (use of poetic metaphor). This vision may be one-sided: it apparently overplays the role in social life of 'strong metaphors' (Black 1993: 26) and plays down non-poetic use of metaphor in daily discourse. Nevertheless, I believe it rightly identifies the essence of metaphor with linguistic creativity: the power to express 'integral thoughts' or revelations of various magnitude.

In opening their book, Lakoff and Johnson (1980: ix) announce that metaphor is 'a matter of central concern, perhaps the key to giving an adequate account of understanding'; by the conclusion, they present it as a new way of accessing reality (1980: 239):

[6] Leezenberg (2001: 16) holds a similar view.

> It is as though the ability to comprehend experience through metaphor were a sense, like seeing or touching or hearing, with metaphors providing the only ways to perceive and experience much of the world. Metaphor is as much a part of our functioning as our sense of touch, and as precious.

The authors openly invoke the Romantic idea of 'imaginative understanding', with the proviso that imagination is not 'completely unconstrained'. They claim to provide 'an account of how understanding uses the primary resources of the imagination via metaphor and how it is possible to give experience new meaning and to create new realities' (1980: 228).[7]

At the same time, one learns that their subject matter is not 'poetic imagination' and 'extraordinary' language but 'ordinary language' – even more so the 'ordinary conceptual system' that underlies it, residing in the 'cognitive unconscious', which they regularly invoke in subsequent publications. Consequently, the title of the book is to be read as '[metaphorically structured] concepts we live by' (1980: 3). The authors' declared aim is to explore empirically this metaphorical system of concepts, primarily on the basis of literal language.

At first sight, Lakoff and Johnson's agenda is baffling. While they extoll metaphor in a way reminiscent of the Romantic tradition – indispensable, opening up new vistas, providing the underlying principle of language and a primary tool of imagination – they say it is operative in ordinary language. They even dub it 'literal metaphor' to distinguish it from 'imaginative (or nonliteral) metaphor' (1980: 53): i.e., underlying figurative language. In their theory, literal metaphor, expressed in conventional language – normally thought to consist of 'dead metaphors' – is supposed to be the most alive (1980: 55). Metaphor and imagination – normally placed in the domain of individual creativity – are automatic, mostly generic processes that produce mappings between conceptual domains that can be scientifically identified and modeled. In his later work Lakoff regularly presents himself as a cognitive scientist who studies the unconscious systems of concepts (e.g. 1996: 3-5).

Metaphors We Live By thus appeals to opposing audiences: readers who believe that metaphor is important because it epitomizes the power of the human spirit – the mystery of creative articulation: lifting the human species out of the realm of purely biological necessities and 'rolling back the world's horizon', to use the imagery of Gadamer – as well as those who believe that any phenomena, including those deemed spiritual or mysterious, are surface manifestations of underlying objective regularities that science can discover. Many who find that opposition of perspectives constraining if not downright wrongheaded see the appeal of Lakoff and Johnson's project exactly in the promise of reconciliation. A search for the rules of imaginative understanding – more generally, for a 'third way' between 'the myths of objectivism and subjectivism' (1980: 185*ff.*) – fosters hopes in a new synthesis.

I believe that the opposition of perspectives on metaphor, language, meaning, etc., is real enough, even while Lakoff and Johnson do not even attempt to do justice to it. On the philosophical level, they choose not to discuss 'certain trends in Continental thought' they claim to be 'serious attempts to

[7] I believe it is this Romantic rhetoric that earns them a place in a *summa* of the writings on imagination down through the centuries (see Brann 1991).

provide a basis for the human sciences', but rather take on 'cafe phenomenology' as the target of their criticism (1980: 223-224).[8] The limits of objective science and Continental attempts to go beyond them in a responsible manner cannot meaningfully be discussed here (see e.g. Merleau-Ponty 2002, Ricoeur 2004, Russon 2004).[9] Concerning metaphor, I can only reiterate that much of Lakoff and Johnson's rhetoric touches a cord in people who view metaphor's essence quite differently and who would find some elements of Lakoff and Johnson's project baffling. Specifically, they would fail to comprehend how one can hope to find 'live metaphors' – articulations of 'integral thoughts' – in the unconscious conceptual systems underlying everyday language use. To unravel the ambiguities I have mentioned in this section, I must take a closer look at CMT and relate it to a standard identification of metaphor as non-literal or unconventional expression.

3. IS CMT AN EMPIRICAL BREAKTHROUGH?

In his contribution to the second edition of *Metaphor and Thought* (Ortony 1993) – originally a collection of papers from a 1977 conference, by leading authorities in the field – Lakoff opposes his approach, which he rather grandiosely labels 'the contemporary theory of metaphor', to the standard view (1993: 204):

> The bulk of the chapters in this book were written before the development of the contemporary field of metaphor research. My chapter will therefore contradict much that appears in the others, many of which make certain assumptions that were widely taken for granted in 1977. A major assumption that is challenged by contemporary research is the traditional division between literal and figurative language, with metaphor as a kind of figurative language.

Clearly, Lakoff presents his approach as empirical discovery that makes many traditional, fundamental distinctions obsolete. As he put it even more trenchantly (1987b: 147):

> If nothing else, it is important to be aware of the theory-dependent status of traditional terms such as *literal* and *dead metaphor*. They carry old and demonstrably false theories with them, and, if not carefully used, they will presuppose those old theories and stifle discussion of contemporary research.

I propose considering two questions. First, is CMT an empirical breakthrough? Second, does is challenge the traditional identification of metaphor? Before proceeding, I would note that, contrary to Lakoff's charge, the terms 'literal' and 'dead metaphor' need not be theory dependent. The distinctions

[8] That they deal with 'subjectivism' in two pages, while their account of 'objectivism' takes almost thirty pages (1980: 195-222), clearly indicates their focus and limitations. In later works (Johnson 1987, Lakoff & Johnson 1999), one finds no direct encounter with Continental thought, even though, as mentioned, Lakoff and Johnson seem to see themselves as its continuators.

[9] Continental philosophy – or hermeneutic phenomenology – cannot adequately be characterised as subjectivist. Rather, it is anti-naturalistic: i.e., opposed to the view that scientific explanations of nature are sufficient and can be extended to cover all of human reality. (Note that Lakoff and Johnson's project is openly naturalistic: see e.g. Johnson 1992, Lakoff & Johnson 1999). It sees nothing wrong with scientific attempts to probe and dispel putative mysteries, so long as one recognizes that models of objective correlations, for all their success in explaining reality, are not the end of the story, not least because they necessarily rely on unexplained 'givens'. Thoughtful scientists admit as much: e.g., 'brains that pulse with certain patterns of electrical activity are conscious. Why? They just are' (Donald 2001: 178).

'literal vs. metaphorical' and 'dead vs. live metaphor' are used in everyday language to mark pragmatically significant oppositions. When a given expression is seen to be used in an extended sense, it is normally – if vaguely, with no theories attached[10] – called 'metaphorical'. When a literal expression is recognized as originally metaphorical (e.g., 'the *leg* of a table'), it is called a 'dead' metaphor. If 'contemporary research' opposes such everyday distinctions, its practitioners should openly say so,[11] and not pretend they are victims of terminological prejudice. Most often, unless they provide a convincing argument that they are talking about phenomena commonly called metaphorical, they simply change the subject. Lakoff attempted to provide such an argument in two publications (1986, 1987b), which I will discuss in the next section.

What are the proposed justifications for the claim that metaphor is not primarily a kind of figurative language but rather a mapping – or set of correspondences – between conceptual domains? In *Metaphors We Live By,* Lakoff and Johnson assume that one's (normally unconscious) 'conceptual system' shapes 'the way we think, what we experience, and what we do every day' (1980: 3). They claim to have discovered – primarily on the basis of linguistic evidence – that most of this system is metaphorical. The evidence they provide shows that people use military – or, more generally, adversarial – phrases when arguing. Consequently, they propose that the concept ARGUMENT is partly structured metaphorically as WAR (1980: 4).

All elements of this justification raise more questions than they answer, relying as they do on strong and highly speculative assumptions, such as the assumption of an unconscious conceptual system – the cognitive unconscious – adopted by 'symbolist' AI research as a working hypothesis. The same assumption underlies *linguistic mentalism*: the claim that language is primarily a mental program that is only subsequently expressed verbally. That – unspecified – chronological relationship underlies the research program Lakoff and Johnson sketch in *Metaphors We Live By*:

> A portion of the conceptual network of battle partially characterizes the concept of an argument, and the language *follows suit*. Since metaphorical expressions in our language are tied to metaphorical concepts in a systematic way, we can use metaphorical linguistic expressions to study the nature of metaphorical concepts and to gain an understanding of the metaphorical nature of our activities (Lakoff & Johnson 1980: 7, *emphasis added*).

As I have pointed out, both Chomsky and Lakoff – despite important differences – subscribe to this position. Linguistic mentalism may be fertile ground for research, as is clearly the case with generative grammar; I will venture some suggestions to this effect in Section Six. Philosophically, however, the assumption of an unconscious *conceptual system* that shapes intelligent behaviour is not viable.[12] As

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[10] These may follow when researchers try to specify the meaning of 'literal' (see Searle 1978 for references) or 'metaphorical'. Metaphor, in this vague and general sense, is a 'supertrope'. It may subsequently be specified as one type in an array of tropes: a challenging task. For a literary attempt, see (Purcell 1990); for linguistic ones opposing metaphor to metonymy, see e.g. (Panther & Radden 1999).

[11] …And thus admit that they call into question 'what people find *meaningful* in their lives' (Lakoff & Johnson 1980: ix, *emphasis original*).

[12] This statement is not meant to question that intelligent behaviour is mosty unreflective – only that it realizes some unconscious mental program (see e.g. Dreyfus 1992).

Ricoeur writes (2004: 107-108), this is a case of 'naive realism which would project back into the unconscious a fully elaborated meaning such as had been progressively constituted in the course of the hermeneutical relationship…. Against this naïve realism we must continually emphasize that the unconscious does not think'.

It is not my aim to trace out the vagaries of Lakoff's project; however, the discussion around the so-called Invariance Hypothesis and the development of blending theory show clearly that conceptual mappings are *post hoc*: they may be formulated only *after* one interprets a given set of expressions. In its original form covering generic-level metaphors – e.g., EVENTS ARE ACTIONS – the Invariance Hypothesis read (Lakoff & Turner 1989: 82; *emphasis added*):

(1) Preserve the generic level of the target *except for what the metaphor exists explicitly to change*.

(2) Import as much of the generic-level structure of the source as is consistent with the first condition.

Lakoff toyed with the empiricist idea[13] that mappings are simple transfers of the cognitive topology of the source domain (1990: 54), possibly running automatically; later he returned to the original proviso that such mappings are constrained by the topology of the target (1993: 215-216). Consequently – though Lakoff has never drawn this conclusion – they are better described as *blending* (Engstrom 1999, Fauconnier & Turner 2002). To the best of my knowledge, Lakoff has also never answered Brugman's criticism (1990: 262-5) that hypothetical metaphorical mappings do not play any role in interpretation of a concept in use, since a concept functions holistically – as a unit – in any given context – as opposed to its possible analytical decomposition in some theoretical model. Neither has he raised the problem of 'gist extraction' (Fauconnier 1997: 188, footnotes 1 and 2): i.e., how the conceptual structure to be mapped or blended can be recruited automatically, according to rules. This problem recurs in all structuralist accounts of meaning that try to account for contextual use in terms of a proposed abstract system.

As opposed to blending theory[14], CMT does not focus on concepts *in use*, but rather aims to explain the development of the *system* of concepts supposedly underlying the lexicon. One must ask,

[13] Chomsky, in his criticism of Skinner, rejects empiricist explanations of language acquisition and higher mental processes (1967 [1959]); he has consistently based his linguistic mentalism on nativist assumptions (for an evolutionary critique, see Deacon 1997: 35, 103*ff.*). Lakoff, on the other hand, has adopted a syncretist position he originally called 'experientialism' (later, 'embodied realism'), without facing the deeper issues in the debate between rationalists and empiricists. This is evident in his and Johnson's answer (2002: 248) to Rakova's charge (2002) that they espouse 'extreme empiricism'. For an evolutionary critique of CMT and an alternative account following (Donald 1991), see (Zlatev 2007b).

[14] The relationship between CMT and blending theory merits separate treatment. In the most recent articulation of their positions, Lakoff (2008: 30*ff.*) presents blending in neural terminology – impenetrable to this reader – and concludes that the 'metaphor approach is accurate for [some cases discussed in terms of blends] and the blending approach is not' (2008: 33); while Fauconnier and Turner choose not to criticise CMT, instead reiterating that blending theory offers 'a richer and deeper understanding of the processes underlying metaphor than we [had available] previously' (2008: 53).

then, if the lexicon can provide enough empirical evidence to sustain the hypothesis that it expresses global processes of concept integration.[15]

First, the issue of interpretation reappears: words have precise meaning only in context, and an ascription of particular lexical items to particular conceptual domains follows a (highly flexible) choice of context. When one classifies the sentence 'I *demolished* his argument' as an example of the ARGUMENT IS WAR metaphor (Lakoff & Johnson 1980: 4, *emphasis original*), one simply chooses to interpret the italicized word in one way rather than another: e.g., the first phase of a construction process on a building site. Similarly, 'you disagree? Okay, *shoot*!' (Lakoff & Johnson 1980: 4) may be interpreted as an invitation to guess rather than attack.

Second, no stable one-to-one correspondence on the structural level between the elements of lexical fields exists to warrant use of the term 'mapping'. In distinguishing literal from non-literal metaphor, Lakoff and Johnson admit that metaphorical structuring is partial (1980: 52-55). They claim that part of a global metaphorical structure unused in one language may be used in another (2002: 254-256); but this merely shows that the lexicon does not provide enough evidence to postulate a global integration of domains. Ortony (1988: 101-3) offers evidence to the contrary. If certain conceptual metaphors existed, one would expect more consistency in the lexicon: e.g., why can one say '*blind with rage*' but not '*blind with fear*'? Lakoff and Johnson's use of examples is reminiscent of Chomsky, whose analyses are based on introspection and eclectic data.[16] In short, Lakoff and Johnson merely illustrate – with carefully selected and interpreted examples – the conceptual transfers that they postulate; they do not discover them on the basis of linguistic evidence.

4. IS CONCEPTUAL METAPHOR A METAPHOR?

In *Metaphors We Live By*, Lakoff and Johnson define '*the essence of* metaphor' as '*understanding and experiencing one kind of thing in terms of another*' (1980: 5, *emphasis original*). This formulation may seem initially almost acceptable, if only because it is left unspecified. On this basis, one could think that a contextual re-description or re-classification of an entity affords better insight; and one concludes that the authors have in mind an act of understanding, based on analogy. Meawhile, 'experiencing' at this stage remains mysterious: a point I will return to at the end of this section.

The cognitive importance of metaphor's ability to express analogy was recognized already by Aristotle (see e.g. Kittay 1987: 2-4). He shows that the phrase '*sowing around a god-created flame*' is based on analogy: the act it expresses stands in the same relation to its object – 'the Sun shining' / 'particular rays of light' – as sowing does to the corn seed (1987 [1457b 26-30]). He famously concludes: 'but the greatest thing, by far, is to be a master of metaphor. It is the one thing that cannot

[15] In general, 'there is a major problem with using only linguistic evidence to argue for functional relations between thought and language' (Keysar *et al.* 2000: 577, in critiquing CMT). Lucy (2000: xi-xii) makes a similar point about empirical work on the Sapir-Whorf hypothesis. Leezenberg claims that cultural concepts are essentially linguistic: they cannot be conveyed without language; more generally, Lakoff presupposes exactly what he should explain: 'the emergence of clearly delimited, distinct cognitive domains' (2001: 142-143).

[16] Corpus research offers CMT a potential antidote; see e.g. (Stefanowitsch & Gries 2007).

be learnt from others; and it is also a sign of genius since a good metaphor implies an intuitive perception of similarity of dissimilars. Through resemblance, metaphor makes things clearer' (1459a 5-7, quoted in Kittay 1987: 2).

Aristotle talks about poetic language; but contemporary research provides ample evidence of the general cognitive power of analogical thinking.[17] So Schön writes (1993: 139-143) that a problem with a new paintbrush – the synthetic bristle did not paint smoothly – was solved when someone in the design group observed that a paintbrush is a kind of pump. The analogy helped the group to change their focus from the shape of the bristles to the gaps between them. Such anecdotal evidence clearly shows that analogical thinking is far from automatic. A flash of illumination – the 'aha!' phenomenon – must be prepared. Before they solved the problem, the design group inspected all the potentially relevant features of paintbrushes affecting their performance. Analogical reasoning must also be appropriated reflectively: following the flash of illumination, one must find the relevance – and the limits – of the analogy. In consequence, the unconscious global transfers of conceptual structure that CMT postulates as underlying contextual acts of understanding do not make cognitive sense. In sum, even though the initial definition of metaphor could seem (almost) plausible, its subsequent specification as a global analogy – metaphor is a mapping or a set of correspondences between conceptual domains (e.g. Lakoff 1990: 48) – is much less so.[18]

Similar problems can be seen when one inspects Lakoff's attempts to prove that conceptual metaphor is legitimately called metaphor – indeed, is the most 'alive' form of metaphor, even when it underlies literal language that consists of dead metaphors. Lakoff admits (1986: 296) that he and Johnson should have anticipated complaints that describing conceptual metaphor as 'literal' metaphor amounts to *contradictio in adiecto* (see e.g. Cooper 1986: 22, Kittay 1987: 20). Nevertheless, he sees no contradiction in their use of the phrase, since the term 'literal' is ambiguous. He enumerates four meanings: (1) prosaic language containing no rhetorical figures; (2) conventional language, as used in specialist domains; (3) non-metaphorical language that is directly meaningful: i.e., not based on metaphorical transfers, in the sense that CMT describes; (4) truth-conditional objective language (1986: 292). Conceptual metaphor is metaphorical by (3), even though it may legitimately be called literal in the other senses.

Notice that Lakoff's distinctions are idiosyncratic. It is hard to see the point of distinguishing (1) from (2). In both cases, 'literal' has the meaning 'the way people normally (conventionally) talk about things' – even if the linguistic conventions of an in-group may look metaphorical to an outsider. It is also hard to understand why (3) and (4) should have the same standing as (1) and (2), since they refer to particular theories of 'literal' rather than any ordinary understanding of the term. Instead of explicating, Lakoff merely obfuscates the central phenomenon – metaphorical language goes beyond

[17] See (Gentner 1998) for references.

[18] A comment by an anonymous reviewer about 'framing' – and a subsequent perusal of (Prandi 2004) – helped me realize that, in some cases, more-or-less global analogical integration of concepts *is* possible. However, such analogies merely express conceptually consistent content. I was unable to integrate this new material into my account and so have appended it to the final section.

conventional ways of putting things, whether by laymen or specialists – by placing it in the context of theoretical attempts to specify or re-define 'literal' and, consequently, 'metaphorical'.

Lakoff's discussion of 'dead' metaphor is even less tractable. He distinguishes four cases, exemplified by the words *pedigree*, *dunk*, *comprehend*, and *grasp*, and says that 'traditional theory would lump them all together as dead metaphors' even though, according to CMT, they are significantly different (1987b: 146-147). Again he conceals the real issue: when metaphorical expressions become conventionalized or 'lexicalized', they are taken as literal. Such 'dead' metaphors – as they are rather prematurely called in English – may be 'awakened' or 'revitalized' (Müller 2008, Nöth 1995: 131); but such acts of resuscitation do not change their literal status as lexical units.

In both cases, Lakoff does not accept the standard of conventionalization – which is normally criterial for literal language or metaphor 'death'; so he changes the subject. He is forced to re-define 'literal'. He postulates an extensive primary level of pre-conceptual image schemas and 'basic level' concepts, which supposedly emerge spontaneously when people interact with their environment. The rest of the conceptual system is assumed to result (mostly) from culturally based semantic transfers.

This helps explain why, in defining metaphor, Lakoff and Johnson talk about '*experiencing one kind of thing in terms of another*' (1980: 5) and so anticipate their theory of how concepts are grounded. As they state in Chapter 12 (1980: 59; *emphasis original*): '…what we are claiming about grounding is that we typically conceptualize the nonphysical *in terms of* the physical – that is, we conceptualize the less clearly delineated in terms of the more clearly delineated. The ambiguous phrase 'in terms of' – which I initially interpreted as 'describe or express in other terms' so as to place Lakoff and Johnson's definition in line with standard usage[19] – turns out to invoke an empiricist scenario of concept formation. 'Physical' concepts are supposed to lend their naturally emergent structure to 'cultural' concepts through metaphor, as in the sequence (1980: 59):

(1) Harry is in the kitchen.
(2) Harry is in the Elks.
(3) Harry is in love.

For Lakoff and Johnson, the concept of containment (IN) emerges directly in physical experience. Thus, the first sentence is literal, the remaining ones metaphorical (SOCIAL GROUPS / EMOTIONS ARE CONTAINERS). This scenario of concept formation is empirically untenable in light of Vygosky's (1962) and Piaget's (2000; see also Rakova 2002) findings, which show that concepts do *not* arise spontaneously at the level of sensorimotor intelligence, but rather through a long process of symbolic social interaction. Their results are confirmed by recent work in evolutionary psychology (Donald 1991; Deacon 1997; Zlatev 2007a, 2007b, 2008).[20]

[19] Jäkel (1997) finds more examples of such terminological ambiguities in CMT.

[20] The criterion of 'converging evidence', often cited in favour of CMT (e.g. Johnson 1992: 345), is much weaker than the potential to deal with *prima facie* contrary evidence. Lakoff has not taken up the challenge presented by developmental research. Chomsky, who debated Piaget during the famous Royaumont Conference,

I conclude, first, that 'conceptual metaphor' refers to a theory of concept formation rather than to metaphorical phenomena as they are commonly perceived; second, that efforts to show that CMT also addresses such phenomena – as I have partly documented here[21] – are unconvincing. I propose to reverse the perspective and start with a description of metaphorical phenomena, primarily to reveal the cognitive work metaphor performs. In Section Six, I will re-frame CMT against this background.

5. METAPHOR IN ACTION

Recall Black's advice: one should try not to restrict metaphorical phenomena prematurely. It seems reasonable to start with a definition that is clearly too broad and narrow it down. Aristotle defines metaphor as the 'application of a word that belongs to another thing'. His definition is based on his ontology of genera and species, so he talks about a transference 'from genus to species, species to genus, species to species, or by analogy' (1987 [1457b]). His explication is of no theoretical concern, as no one believes any longer in the coincidence of language and reality or the idea that things have names that intrinsically belong to them.[22] I suggest reformulating Aristotle's definition as 'an application of a word out of its normal, or literal, context of use', where I interpret 'literal' as 'conventional': the way people normally talk about something in default contexts (see also Searle 1978). Note that, among the several poetical examples Aristotle discusses, one finds cases of non-literal language use that are broadly metaphorical, but which one would not classify as narrowly metaphorical. Such tropes or figures of speech as hyperbole, litotes (understatement), or irony diverge consistently from literal meaning, serving to express the speaker's meaning in a non-literal way without modifying the literal meaning of the words used; one could say that they are entirely pragmatic or are discourse phenomena.

Metonymy is closer to metaphor narrowly understood: in both cases, non-literal words are used in a transferred sense. Metonymy is usually thought to be simpler than metaphor, as the transference normally concerns another entity from the same pragmatically active domain, and metonomy serves mostly referential purposes: e.g., 'the *ham sandwich* is waiting for his check' (Lakoff & Johnson 1980: 35; *emphasis original*), where the italicized words stand for a customer. Note that the name 'figure of speech' – inherited from the rhetorical tradition centred on literary research – hardly seems appropriate in such pragmatically motivated and mundane cases of meaning transfer, which often underlie semantic shifts in the lexicon: e.g., *board* for 'accommodation *with meals*' or 'governing body'.

The simplest case of metaphor is equally mundane and plays a similar role in language. It may be termed *catachresis*, which is normally defined pejoratively as 'improper use of words' or 'application

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disregarded the significance of Piaget's findings completely (Piatelli-Palmarini 1995: 373-6).

[21] I have not presented attempts to find a place in CMT for 'live' metaphor (Lakoff & Johnson 1980: 52-53, Lakoff & Turner 1989). I suggest that live metaphors are better represented as *post hoc* blends, created after one chooses an interpretation.

[22] As my anonymous reviewers rightly pointed out, Aristotle's definition is really too narrow for my purposes, and my account of his position is highly schematic. I invoke – or abuse – Aristotle to make the hopefully uncontroversial point that metaphor, in the most unspecified sense, concerns non-literal use of words.

of a term to a thing which it does not properly denote' (OED quoted by Black 1962: 33, Footnote 8). That said, such 'misuse' may be welcome if it serves 'to remedy a gap in the vocabulary' (*catachresis inopiae causa*); so that 'the new sense will quickly become part of the *literal* sense' (Black 1962: 33, *emphasis original*). Though true, this description is too narrow: the driving force behind semantic shifts is not only a perceived shortage of literal expressions but also a felt need to be more expressive. This is why one finds so many synonyms in the lexicon for the entities that matter to people (Geeraerts 1988). A metaphorical extension of meaning – e.g., a computer *mouse* – differs from a metonym because it is normally based on expressive similarity rather than pragmatic contiguity.

As defined above, catachresis lacks the distinctive feature of metaphorical expression narrowly defined – which, in the oft quoted phrase of Samuel Johnson, 'gives us two ideas for one' (Richards 1965: 118). Catachresis – metaphorical or metonymical – is accepted as so obviously apt in the context of use that the potential clash, or tension, with the original meaning – Johnson's 'two ideas for one' – does not arise. Here, at last, I may broach the subject of metaphor's cognitive 'work'. The computer *mouse* provides a distinctive label for what was a new steering device: a hardware innovation competing with *trackball*; thus, it filled a gap in the vocabulary. It achieved this goal in an expressively satisfying way, compared with the merely descriptively adequate *trackball*, since the shape of a computer mouse and its erratic movement may bring to mind an actual mouse. At the same time, as a transferred sign vehicle (*signans*), it did not influence the new concept (*signatum*), except perhaps to make a marginal suggestion – again, compared with *trackball* – that this kind of thing is accessible to anyone, not just computer specialists.

Cognitive work is necessary whenever a metaphorical expression is not transparent: when it does not lead directly to the intended meaning. Since *mouse* is clearly referential and the original referent independently available, hitting on this suggestive name required inspiration – but only very little insight to recognize its meaning and accept it as suitable. The situation changes when a metaphorical expression or *vehicle* is not initially transparent to a particular semantic content: its *tenor* (Richards 1965: 96). These terms may be easier to explain if one invokes a pictorial metaphor used in advertising: e.g., a petrol station (*tenor*) and a jumping tiger (*vehicle*). The *tenor – the* referential situation – is conventionally understood as 'one's brand of petrol', the *vehicle* as 'a tiger's leap'. On Richards's interactionist account (1965: 93), 'when we use a metaphor we have two thoughts of different things active together and supported by a single word, or phrase, whose meaning is a resultant of their interaction'. It is important to recognize that the metaphorical vehicle is not the metaphor: it provides a perspective on the tenor (Kittay 1987).

Peirce put forward essentially the same claim in his classification of signs,[23] which divides signs into three categories: icons, indexes, and symbols. Icons sub-divide into images, diagrams, and metaphors. His classification follows on the question: what allows one thing (the sign vehicle: *signans*) to signify or stand for another (its object: *signatum*)? In the case of icons, the answer is a

[23] I base my presentation on (Nöth 1995).

feature of the *signans* shared with its *signatum*. In the case of indices, it is a natural relation joining the two: e.g., cause and effect. In the case of symbols, it is a matter of convention. Since metaphors are symbolic, they can be called 'iconic metasigns' (Nöth 1995: 123, 133). To understand this label, notice that the metaphor in the previous paragraph signifies by reference to other signs: specifically, by reference to the similarity between their objects. Little cognitive work is involved. The metaphor can easily be interpreted because the commercial intention is in clear view, while the contextually relevant *signata* – 'the petrol's energy for driving' and 'the tiger's energy unleashed in the jump' – have enough common structure to blend successfully: e.g., 'the petrol will give your car increased energy'. The metaphor may be felt to remain alive, since it may equally well evoke more specific interpretations: e.g., 'with this petrol, you can easily overtake other drivers', 'you are the master of the road', 'you can impress the other sex'. The metaphor's level of live-ness is apparently linked to the interpreter's willingness to accept various conventional features of the vehicle's object – 'speed', 'power', 'attractiveness' – as potentially shaping, or 'framing', the message. Even a trite metaphor like this one cannot be made literal without loss of meaning. Only dead metaphors like 'Sally is *a block of ice*' can be literalized (or, rather, *are* literal), because they have a single conventional interpretation: 'Sally is unresponsive to advances'.[24]

To see better the cognitive work involved in the creation and interpretation of live metaphor, consider a more extended literary example from Thoreau's *Walden*, quoted by Perrin (1987:221; *emphasis added*):[25]

> Early in the morning, while all things are crisp with frost, men come with fishing reels and slender lunch, and let down their fine lines through the snowy field to take pickerel and perch; wild men, who instinctively follow other fashions and trust other authorities than their townsmen, and by their goings and comings *stitch* towns in parts where else they would be ripped.

Wild men – one is told – 'stitch' towns together. The metaphorical *vehicle* has as its object the anglers' outings (*tenor*). It is easy to see the similarity between vehicle and tenor: the 'ground' of metaphor in Richards's terminology (1965: 117). The footprints in the snow resemble stitches from a bird's eye view, while 'goings and comings' are as repetitive as stitching. The meaning of the metaphor can be paraphrased as 'the anglers join the towns by their footprints'. Note that this literal interpretation does not convey the metaphor's full meaning. The physical movements of the anglers – 'wild men' who do not really belong in towns – are viewed as an important unifying activity. I believe that Thoreau perceives them as Nature's envoys, inadvertently restituting its unity, partly destroyed by towns.

What mental work is necessary to produce and understand the metaphor? In general terms, one must be able to express (the writer) or adopt (the readers) an unusual perspective – unusual, that is, for town-dwellers, but quite normal for someone like Thoreau. Towns are causing rifts in Nature; the anglers' outings are Nature's response to the threat. Thoreau's task is to help his readers reconfigure the

[24] In context, it could mean other things. 'Literal' meaning is ascribed in a minimal context, as in a dictionary.
[25] My presentation owes much to Perrin's insightful analysis.

standard bourgeois view of things: from their perspective, the anglers' outings are marginal, the towns linked by roads; nature is empty space waiting to be civilized. A gestalt flip is required.

Thoreau struggles to formulate what is, from his vantage point, the anglers' *real* role. He calls them 'wild men': a label that would conventionally suggest – at least to townsfolk – lack of civility or lack of restraint. Here, it means that they belong to nature rather than civilization. Thoreau explains that they 'instinctively follow other fashions and trust other authorities'. The reader may understand that they are sent on an errand: that they heed the call of someone more powerful. Only in this context does *stitch* make sense. From the bourgeois perspective, 'wild men' cannot be rather expected to 'stitch': a woman's job requiring patience and conscientiousness. More importantly, the anglers make no coordinated efforts to achieve the goal: to avert the threat posed to Nature by the towns; 'stitching' is a byproduct of their activities. One is meant to view them as instruments of Nature, which guides their movements and is ultimately responsible for the 'stitching'.

As the metaphor's author, Thoreau starts with a vivid experience of the *tenor*: in his mind's eye, he perceives the anglers' outings as a restorative activity masterminded by Nature. To express his vision, he needs a suitable vehicle that can describe both the anglers' activity and its role in Nature's order. The use of the word *stitch* is contingent,[26] perhaps motivated by the activation of the semantic field of clothing and fabric ('fashions') and by the bird's eye perspective on the winter scene, which provides the common schema: the similarity motivating this iconic metasign. So long as the scene is not crystallized into a particular image, the original intention can find other vehicles. It often happens in a text that a metaphor is 'corrected': replaced or complemented by another, when the author realizes that his first choice carries unwelcome suggestions or is not fully adequate to his vision.

As a reader, one has no access to the author's lived experience. One can only try to piece together the clues provided. In the present case, one must first solve the 'riddle' of the metaphor: why was *stitch* used? The task is easy because the *tenor* is tangible: the context makes it clear what the *vehicle* refers to, and the common schema can be extracted. However, the job of understanding the metaphor remains. One must grasp the situation from a new perspective, and this requires the suspension of standard assumptions. Only when the new perspective is adopted – only when nature actually is perceived as a piece of cloth torn by human activity – can *stitch* be understood with no cognitive effort. Only then may it become a literal expression.

One can now see better why Lakoff and Johnson's theory of conceptual metaphor is not about live metaphor, or metaphor *sans phrase*, despite their claims to the contrary (Lakoff & Johnson 1999: 69-70; *emphasis original*): '…the theory of the novel cases is the same as the theory of the conventional cases. Thus, the theory of conceptual cross-domain mapping is exactly the theory needed to account for traditional cases of novel metaphorical expressions. It is thus best called a *theory of metaphor*'.
Recalling statements I have quoted previously – it is not really true that 'the essence of metaphor is *understanding* and *experiencing* one kind of thing in terms of another' (Lakoff & Johnson 1980: 5,

[26] If so, the metaphor would not be 'emphatic', in Black's terminology (1993: 26).

emphasis added) or that 'we typically conceptualize the nonphysical *in terms of* the physical – that is, we conceptualize the less clearly delineated in terms of the more clearly delineated' (1980: 59, *emphasis original*). The situation is much more complex than such an empiricist scenario suggests.

By definition, lived – as opposed to vicarious – experience is always direct. For Thoreau, the experience of the *tenor* – the anglers' outings – is not only direct but also, one assumes, well delineated and immediately understood, since Thoreau normally treats nature as an organic unity or self-mending piece of fabric. For his bourgeois readers, on the other hand, such 'outings' would conventionally be understood as an unimportant, private pastime. Live metaphor is essentially about making available to one's audience an individual, rich, concrete experience in intersubjective, abstract, stereotypical terms – or, if you will, expressing the unfamiliar in terms of the familiar.[27] By describing 'outings' as 'stitching', the metaphor activates conventional aspects of the latter activity suitable to the context – e.g., 'temporary mending', 'part of a healing process', 'leaving traces' – meant to help the reader suspend his standard view of 'outings' and undergo the required gestalt flip.

Metaphorical re-conceptualization is not based on transfer of concrete conceptual structure from physical experience to a more abstract domain. Rather, it involves the contextual recruiting of selected, suitable, conventionally available aspects of a notion to help reconfigure another notion in line with an individual experience or vision: a blend. The 'less clearly delineated' from Lakoff and Johnson's *dictum* should be understood as 'individually and experientially available', the 'more clearly delineated' as 'intersubjectively and abstractly available'.

In sum, one can say that metaphors articulate a novel vision and so introduce a possible tension into one's standard, or *literal*, ways of expressing phenomena (Ricoeur 1977). Depending on the type of metaphor and discourse, this tension varies in strength and scope and puts different requirements on the audience. In the case of metaphorical extensions serving as labels for new entities such as a computer mouse, there is, perhaps, no significant tension: no beliefs to be suspended, no notions reconfigured. In the case of advertising, such as a leaping tiger advertising petrol, the tension is between the conventional and an entity's implied 'emotional aura'. One is not expected to reconfigure the meaning of petrol, merely to view one brand as more desirable than another. If one is so inclined, one can adopt various attitudes towards the entity, depending on context; such framing is exploited mercilessly both by advertising and propaganda. In the case of a new way of life that transforms one's perspective on various aspects of reality – as Thoreau describes – the tension between the conventional and the vision can potentially be strong. One gains access to such novel visions primarily via metaphorical language, which requires one to suspend one's everyday way of grasping things.

To conclude: in the circles in which metaphor is traditionally esteemed, it is a way to express individual revelations, which help extend the vistas of human existence. This is easy to see in the

[27] As Leezenberg notes (2001: 259), within CMT Indurkhya (1992: 253, 280) takes a similar position: 'for Indurkhya, the source is a richly structured, abstract network, while the target is an environment, which has an autonomous structure, but is less ''abstract'' or conceptualized than a concept network: it lies at the level of the sensorimotor data of concrete experiences rather than abstract concepts'.

domains of articulation traditionally viewed as opposed to the commonsensical: poetry and philosophy. As opposed to ideology – assuming Thoreau's vision underlies the ideology of the ecology movement – poetic vision is usually intensely private. Normally, it does not invite one to drop – or even suspend – one's everyday view of reality. Rather, one is invited to visit a world of individual experience that need not make any claim to universal significance.

Of course, philosophy *does* make such a claim. In this respect, it is similar to science, which also abounds in metaphors – necessarily so, if the present account is correct. A philosopher's offer of metaphorical refocusing challenges common sense. It belongs to a communal, never-ending attempt to reveal the contours of the human condition. It does not deny the local, practical validity of commonsensical formulations; instead, it gives them a wider horizon (Pawelec 2009b).

6. CMT REINTERPRETED

If one understands the work of metaphor as I have suggested, this raises a question: what phenomena *does* CMT reveal? To be sure, the question has no single answer: CMT may prove valuable in various intellectual endeavors. In general, however, I believe CMT is much more important for what it invokes than what it reveals. Following Chomsky's formalist approach to language – valuable within its narrow limits – CMT exemplifies a search for linguistics with a 'human face'. Though it is rooted in the same mentalistic paradigm as Chomsky's generative grammar, it has extended that research agenda enormously. If one accepts that CMT compresses the expressive processes taking place over the history of a linguistic community and the interpretative processes taking place in a particular context into the unconscious mind of a generic human being, then the material collected within the paradigm can help one look for real-life factors that shape one's language and understanding.

Let me start with a detour: a psychological experiment testing CMT's validity. As Keysar *et al.* (2000) show, reading comprehension experiments do not corroborate the claim that conventional phrases are understood because interpreters mentally activate an appropriate cross-domain mapping. The researchers report evidence that such mappings may be active when novel phrases are used. Here is one example from the study, testing the conceptual metaphor IDEAS ARE CHILDREN (2000: 585; *emphasis original*):

> As a scientist, Tina thinks of her theories as her children. She is a *prolific* researcher, *conceiving* an enormous number of new findings each year. *Tina is currently weaning her latest child.*
>
> As a scientist, Tina thinks of her theories as her children. She is a *fertile* researcher, *giving birth* to an enormous number of new findings each year. *Tina is currently weaning her latest child.*

The researchers found that it takes significantly less time for subjects to understand the final sentence in the second text, suggesting that only novel phrases activate the mapping. They claim that this result disproves the assumption that cross-domain mappings underlie the comprehension of conventional language while showing that they may underlie comprehension of novel expressions. Is this really so?

In both versions of the text, the first sentence is identical and concerns a female scientist, Tina.

That she 'thinks of her theories as her children' – an explicit mention of the purported conceptual metaphor and a case of psychological 'priming' – is not directly relevant to the next sentence of the first text; therefore it is backgrounded, and the reader must resolve whether the last sentence changes the subject or should be interpreted in light of the first sentence. This takes time. In the second version of the text, the narrator openly adopts Tina's analogy: a creative use of 'giving birth'. Thus, the reader is prepared to interpret the last sentence in that light. The difference between the texts hinges on the flow of thought in discourse (Chafe 1998). The first sentence establishes the topic of discourse: Tina the scientist. At the same time, it introduces a potential sub-topic – Tina the mother of scientific theories – which is backgrounded in the first text and developed in the second.[28]

I submit that neither the conventional nor the novel expressions in the text require cross-domain mappings for their interpretation, because such global conceptual mappings make no cognitive sense – as I argued in Section Four (see also Section Seven). How is it possible, then, that one understands the final sentence about Tina? Apparently, one relies on local analogy and performs a blend. One knows that the sentence is about Tina's work, presented in terms of maternity. Since weaning is the first step to a child's independence – a contextually relevant conventional association – one may think that Tina is ready to communicate her latest findings. The real difference between conventional and novel phrases may be explained in terms of 'stereotypical adequacy': the former are normally assumed to be 'good enough'[29] to express one's ideas on a subject, while the latter require special justification: in the present example, the narrator – rather incongruously – fleshes out Tina's analogy by describing her work. Still, the phrases that appear in the text, whether conventional or novel, do not pose a significant challenge for interpreters, compared with Thoreau's example, not to mention much poetry and philosophy. Why?

Apparently, because the subject matter – the productive life of a scientist – is socially available as a set of stereotypes.[30] Such platitudes may be expressed extravagantly with novel phrases as in the second version of the text; or, more often, in the standard way, with conventional language. I submit that stereotypes – understood broadly as a community's standard ways of viewing reality – offer a much more viable explanation of one's everyday understanding than the system of conceptual mappings in the cognitive unconscious that Lakoff advocates.

One could profitably inspect the material gathered within the CMT framework while building a cognitive theory of social stereotypes – moving away from methodological individualism in the process. Much of Lakoff's work – especially in the domains of social criticism and political ideology (e.g. Lakoff 1987a: 412-415, 1992, 1996, 2008) – openly relies on 'folk models': an analogous notion

[28] Keysar *et al.* (2000: 588-9) reject this interpretation; but their argument, relying on other experimental data, cannot be quoted here for lack of space. Crucially, however, they interpret discourse structure in terms of anaphora (cohesion) rather than 'flow of thought' (coherence) (*cf*. Halliday & Hasan 1976, Chafe 1994).

[29] Conventional phrases are standard 'stopping orders' in the process of formulating one's intentions (McNeill 2005: 91-92).

[30] See (Zinken 2004) for an exposition on the importance of the notion of stereotype within cognitive linguistics; see also (Putnam 1975).

invoked in cognitive science. I am not claiming that a translation of individualistic or universalistic CMT into a particularist sociocultural paradigm is possible. CMT treats everything that does not belong to sensorimotor experience as metaphorical and relies primarily on generic cognitive characteristics of human beings, making it insensitive to the crucial role of historical situatedness and linguistic articulation and dissemination in metaphorical attempts to stretch – and cross – the limits of a conventional picture of the world. Still, its global and *post hoc* perspective may be useful in identifying real-life factors active in the situated process of 'rolling back the world's horizon' – to invoke again that hermeneutic imagery.

Lakoff and Johnson's division of conceptual metaphors into structural, orientational, and ontological (1980: chs. 2, 4, 6) may be viewed as indicative of such factors. Structural metaphors could help identify the situated expressive force of various fields of experience and the entities used to articulate various domains. Orientational metaphors could help ascertain the local coordinates of experience, in terms of which people position themselves in all spheres of their existence. Finally, ontological metaphors could help in the search for the most abstract terms people use to stabilize their experience.

To be sure, such a general statement as I have offered becomes informative only if one can discern the situated relevance of these factors. I do not pretend to show here what that task requires. I can merely point out possible avenues for research.

I believe that Dirven's 1994 book *Metaphors Afrikaners Live By* makes a start in the right direction. Dirven describes the phraseology used by Afrikaners as expressive of local conditions, contrasting some of their phrases with Dutch equivalents to reveal the influence of physical factors on meaning: e.g. the relative abruptness of an African sunrise (1994: 11-13). Dirven cites private communications with Lakoff, who apparently agreed at that time that the title of his book with Johnson could be glossed as 'metaphors Americans live by' (1994: 180). As is well known, however, Lakoff moved away from this culturally embedded interpretation – except for his political engagements – towards a universalistic and biological agenda.

Zinken (2004) discusses at length the work of the Ethnolinguistic School of Lublin, Poland. Professor Jerzy Bartmiński and his colleagues focus on three domains: reconstructing the linguistic picture of the world of rural Polish communities, analyzing various social stereotypes, and studying axiological concepts. 'The common theme… is to reconstruct *pictures of the world* entrenched in language' (2004: 116; *emphasis original*): an approach that ultimately goes back to the German Romantic tradition of language study of Herder and Humboldt.[31]

Finally, let me quote at length Brigitte Nerlich (2003: 136), who advocates adapting Gibson's ecological approach to metaphor study:

[31] Returning briefly to the issue raised in Section Two: how can one theorize the relationship between individual metaphorical revelations and a social unconscious system of thought – conceptualized in this paper as a socially available system of stereotypes? This is an important question in the study of historical phenomena, as Gadamer explores in the hermeneutical tradition. I believe that Gadamer's notions of 'prejudice' (1993: 269*ff.*), 'horizon' (1993: 302*ff.*), and 'style' (1993: 493*ff.*) are crucial for serious attempts at providing an answer.

> Similarly [to Gibson], I have been dissatisfied with the ways some cognitive linguists study metaphor in relatively artificial laboratory settings and conceptualise it as an internal cognitive event and I would like to replace this by a more ecological approach. I want to study the affordances that a certain metaphor has, what it can be actively used *for* and what it has been effectively used for, and how this changes the metaphor and the way it is used over time. I want to study the interaction and complementarity between a metaphor and its environment of use.… An ecological theory of metaphor would study the 'structural coupling' between a metaphor and the environment, how it is constantly interacting with its (discursive) environment and, in the process shaping the (discursive) environment itself, as well as, more broadly, the sociocultural/economic circumstances of the time(s).

7. CONCLUDING REMARKS

This section is an appendix of sorts. I would like to take up two issues, partly in response to a reviewer's assessment that the paper lacked clear structure and argumentative power. In hindsight, I recognize that this perception may be quite legitimate, resulting not only from my general limitations but also the way I approach the subject: rather than presenting and defending my own position on metaphor and criticizing CMT from that vantage point, I first question – in a somewhat deconstructive manner, following certain traditional formulations – the way Lakoff and Johnson try to model metaphor. Subsequently I attempt to probe metaphorical phenomena – an unending task – as a backdrop against which I can assess Lakoff and Johnson's contribution. To help clear any remaining confusions, I would like to conclude with a more transparent linguistic description of the work of metaphor – one that is much more appreciative of Lakoff and Johnson's efforts and that finds an important place for 'global' analogies ('structural metaphors') in the spectrum of metaphorical phenomena. Finally – with some trepidation – I will sketch a philosophical vision that might serve to underpin an alternative account of the primacy of metaphor in language.

In his thoughtful and clear reflections on metaphor, Prandi writes (2004: 383): 'metaphor is the only figure that turns inconsistent predication into a form of conceptual categorisation'. This is a more transparent description than I used to differentiate metaphor from other tropes: basically, that metaphor is not just a contextual departure from literal meaning; instead, it offers a new perspective on a domain – even as far as urging its conceptual re-configuration in 'strong' cases.

Prandi continues (2004: 390):

> Unlike metonymy and synecdoche, however, metaphor is capable not only of bringing to expression independent and consistent conceptual structures; it is also capable of constructing conflictual complex meanings which impose on concepts unexpected relations. As they can hardly be justified from within the realm of concepts, which are by definition consistent, inconsistent conceptual relations depend, for their very taking shape, on the specific grammatical structure of specific linguistic expressions.

This passage brings to mind Richards' discussion (1965: 117*ff*.) of the 'ground' of metaphor: i.e., the role of similarity and analogy in making metaphor work. As the passage shows, Prandi divides metaphors into two general types: consistent and inconsistent. The latter rely crucially on linguistic expression ('poetic metaphor') and are not expected to result in definite analogy (Prandi 2004: 400). One can link Prandi's assessment with Richards' criticism (1965: 123*ff*.) of Breton's poetic style,

which relies on a juxtaposition of apparently incongruous elements. Metaphorical inconsistency – to be functional – must still be able to convey an 'integral' thought or provide access to a world of private idiosyncratic experience: a task that requires carefully crafted linguistic prompts.[32]

Prandi focuses on consistent metaphors (2004: 392-393), classifying them based on two types of conceptual mappings: regressive and progressive. The former – exemplified by lexical catachreses such as 'the *wing* of a building' – drop all source content that is not compatible with the target: what one can call 'regressive consistency'. The latter – exemplified by open metaphorical analogies such as Kuhn's 'scientific revolutions' – are consistent in a projective way: they aim at restructuring the target. On a scale ranging from purely regressive analogy to endlessly projective analogy, conceptual metaphors occupy the middle ground: they are based on regressive mappings – like catachresis and unlike open analogy; but they are still productive within those limits: they allow novel verbal applications. Prandi says of such metaphors (2004: 390) that they 'are rooted in consolidated analogical relations, largely shared and taken for granted as such'. It appears that CMT's initial appeal derives – to some extent – from the choice of material: 'anonymous metaphorical concepts' (Prandi 2004: 392) like LIFE IS A JOURNEY are global, socially available, unconscious, regressive analogies that may still be applied creatively, within those limits.

What does it means for language to be 'vitally metaphorical': the issue linked with the supposed poetic origins of language? One immediately faces a logical paradox. Since metaphor is defined in reference to the 'literal', it is hard to see how it can be primary. Notice, however, that it is equally hard to imagine the genetic primacy of the 'literal': on pain of circularity, one cannot explain the origins of conventional meaning by reference to convention. The opposition between literal and metaphorical meaning leads to philosophical aporia.[33] In phenomenological jargon, the situation calls for a more 'originary' take underlying subsequent distinctions; in Kantian terms, one searches for the 'transcendental' conditions of phenomena.

Lakoff and Johnson's account is based on the idea that metaphor is embodied and conventional language secondary; indeed, convention is purely epiphenomenal on their account. To justify their terminology, they postulate a 'literal', pre-conceptual level of sensorimotor interactions with the world. Such 'basic concepts' – at this stage, their empiricism gives way to idealism – are extended metaphorically and made available conventionally, in varying portions, depending on the culture. Their eclectic account gives no cogent reasons why and how such things should happen: put another way, why and how some animals were transformed into human beings.

The alternative account really tries to overcome the opposition between literal, already available meaning and metaphorical, extended meaning. Metaphor is primary, taken to mean 'foundational acts of (attaining) meaning' or 'originary expression'; there is no primary 'literal' level. Consequently, one

[32] Perhaps symptomatically, Breton's poem *Free Union* is a favourite example in cognitive analyses, which focus primarily on conceptual transfers rather than linguistic surface; see e.g. (Lakoff & Turner 1989: 93-5, Gibbs & Bogdonovich 1999, Stockwell 2002: 115-6).

[33] The same goes for other dualisms such as matter/spirit or body/mind.

should reverse the phrase used in reference to Lakoff and Johnson's view – 'metaphor is embodied' – producing 'embodiment is metaphor' (see Cazeaux 2007: 78). There is no opposition between something given – some 'presence' (things, brute facts, raw experience) – and the meaning ascribed to it. Instead – to gesture at Peirce – one has embodiment grounded in semiosis. The term 'metaphor' is justified because all 'originary' acts of meaning are acts of 'going beyond' or extending the reach of one's body – whether outside, in gradually more conscious commerce, or inside, in efforts to deepen one's self-consciousness.

This anti-dualist perspective, developed in hermeneutic phenomenology, is clearly vertiginous. I cannot hope to give it much substance here. However, I would like to show that it is of use in metaphor research. To attempt this, I will follow John Russon's interpretation (2004) of Hegel's *Phenomenology of Spirit*. The guiding question is: how can one overcome the dualism of objective presence and subjective interpretation? To interact with the world, one must belong to the same reality: one must be *of* the world as a spatiotemporal object. To experience the world though, one cannot just be placed within it as an object; one must also be a subject: an intentional body open and sensitive to the form of the other. One must be able to contrast one's 'here' with one's 'there': the 'there' with which one is consubstantial. (Remember the proviso: dualisms are ruled out as arbitrary.) One must have an identity that straddles one's self and one's 'other'. The other must be a meaning *of one's own body*. How can 'there' / 'the other' be a bodily meaning?

The other can be a meaning for one's body only if one could be 'there'. It must be a possibility inherent in one's existence 'here': in being open to its form. One must be able to move to reach it; movement opens the temporal dimension. To notice the other, one cannot just be immersed in it: one must be able to oppose it to oneself, to *point* to it. This requires a pointer, a sign – something that does not present itself for itself, but as something to pass over in favour of what it directs toward. Such acts of passing over, when a new way of interaction yields a new meaning, may be called metaphorical in the primary sense. Something can appear – be present – only if it is presented by a sign. Put another way, presence presupposes some minimal 'writing': a bodily act of expressing what is; while seeing is always 'reading' what one has already inscribed into reality. To return to my starting point, the dualism of objective presence and subjective interpretation is shown not to be primary. Presence, or appearance, is already interpretive; it rests on minimal tools of expression, of 'language', actualized as simultaneous 'reading' and 'writing': interpretive acts of one's meaningful involvement in reality.

The body is not just something material and able to move. The body is what allows one to *realize one's desires* – or 'drives', if one prefers a term that covers lower organisms. As the developmental psychologists have shown well, in the case of human beings, one's material body is not one's own from the start: it must be appropriated in action. The material body becomes one's body once it exists as the expression of one's will. Learning to control his 'own' body, the child develops a division between himself and others. In the process, the primary appropriation of the body is, with passage of time, reproduced on a larger level as he develops habits of interaction with things and with other people.

Through habituation, what was alien and resistant becomes his 'own': the medium for his self-expression and self-realization. In short, it becomes his *extended body.*

If this formulation seems farfetched, recall how easily one appropriates the potential for extraordinary movement inherent in vehicles or sport gear: the instruments are integrated into one's 'body schema', becoming 'part of oneself'. Still, the most obvious confirmation of the presence of extended bodies comes from one's deep, existential identification with social collectives, be it through marital union or body politic.

To recapitulate: the dualist divides experience into the passively 'objective' – something simply appears and is present – and the actively 'subjective': one reads things one way rather than another; one 'puts one's own spin on it'. According to the anti-dualist, something appears only if it is mediated by one's body, which 'writes' and 'reads' simultaneously. At the lower level of sentience, the body 'writes', unconsciously turning the totality of experience into a sign for an existentially important content, be it food, mating partner, or predator; and 'reads', enacting the 'text', immediately following the text's inscription in its behavior. At the higher level of self-consciousness, the body – as system of life support – changes its essence to become the body as system of self-expression. The body 'writes' as it gestures, producing a material totality to express its intent. The body 'reads' as it recognizes that totality and is able to discover a unified intent in it. Consequently, in Russon's paradoxical formulation (2004: 80): 'I can read only the autobiography I have always already been writing, or again, I can write only the autobiography I have always already been reading'.

In this way, at some point one reaches a stage where a minimally self-conscious body as represented by e.g. a gang of chimps becomes a self-conscious body one can call a linguistic community. That community can come in various sizes, from a person's somewhat 'schizophrenic' dialogues with himself to Gadamer's notion of the 'conversation' of humanity as a whole. Crucially, the body in question is an intersubjective collective, within which various subjects perform roles ascribed to them by the logic of their community: that is, ascribed in the light of its legitimate aims.

In the relationship of mother and child, the roles are clearly different and – at least at first – extremely unequal. For some time, the child cannot be said to perform its role; rather, it grows into it, becoming self-conscious in the process. Of course, the mother is self-conscious from the start and knows the general logic of this extended mother/child body – as inscribed by her culture, which offers her paradigms of 'good mother', 'normal child development', 'happy family', etc.

While 'reading' the 'text' of her relationship with her child – the history they have written together in unequal parts: their joint autobiography – the mother may encounter obstacles that force her to re-evaluate and consequently re-write the part she plays. 'Am I a good mother?' 'Is this what motherhood is about?' 'What should I do for my child in this extraordinary situation?' Over the long run, the 'texts' or 'autobiographies', written by bodies of one kind or another, influence the shape and self-perception of the body type: e.g., 'what is the modern family?' As postulated by the Romantic tradition, linguistic metaphor plays an important part in this process.

To be sure, I have only scratched the surface. I am afraid I have raised more questions than I have answered. I may only hope that the vantage point I have posed is clear enough to offer a better focus, through future research, on the phenomenon of linguistic metaphor.

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Deliberate Metaphor Affords Conscious Metaphorical Cognition

Contrary to what is assumed in Conceptual Metaphor Theory (CMT), the conceptual power of metaphor may not lie in its widespread unconscious use but in its more limited and targeted deliberate use, which may or may not give rise to conscious metaphorical cognition. Deliberate and conscious metaphorical thought is connected to the general functions of all conscious thought as described by Baumeister and Masicampo (2010). Their theory provides a basis for demonstrating how deliberate and conscious metaphorical cognition facilitate social and cultural interactions, by reconsidering Musolff's (2004) analysis of metaphor in political discourse on European integration. The paper concludes by formulating some implications of CMT's neglect of conscious metaphor and of deliberate metaphor more generally. If the power of metaphor lies in thought, as has been held by CMT for thirty years, it may be that conscious rather than unconscious cognition – or, more generally, deliberate rather than non-deliberate metaphor use – enables that power. Given the relative infrequency of deliberate and conscious metaphor use, this, in turn, may entail that the online effect of metaphor is more restricted than has been assumed over the past three decades.

Keywords: metaphor, Conceptual Metaphor Theory, intentions, attention, consciousness.

1. INTRODUCTION

The idea that metaphor is a matter of thought not language has revolutionized the field. The recent *Cambridge Handbook of Metaphor and Thought* (Gibbs, 2008) bears testimony to the explosion of cognitive-scientific metaphor research over the past decades by offering a thoroughly renewed version of the picture provided by its predecessor (Ortony, 1993), itself a revised edition of the classic volume appearing fourteen years before. One important part of this cognitive-scientific re-conceptualization of metaphor is the proposal of the existence of so-called conceptual metaphors: extensive, systematic, complex, entrenched mappings across distinct conceptual domains that are activated during all sorts of cognitive tasks (Lakoff 1993, 2008; Lakoff & Johnson 1980, 1999; Gibbs 1994, 2006). Familiar examples include LIFE IS A JOURNEY, ARGUMENT IS WAR, THEORIES ARE BUILDINGS, LOVE IS A DISEASE, ORGANIZATIONS ARE MACHINES, TIME IS SPACE, and HAPPY IS UP. The fruits of and issues raised by thirty years of Conceptual Metaphor Theory (CMT) are considerable and have been widely summarized and reviewed: e.g., (Gibbs 2011; Steen 2007, 2011a).

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Yet one fundamental question has been neglected: the distinction between metaphor as a matter of conscious vs. unconscious thought. Almost all metaphor research – especially in CMT – has focused on metaphor's *unconscious* character. Consciousness has been a controversial issue over the past decades (see e.g. Baars & Gage 2010); this may be one reason why conscious metaphorical cognition has been ignored. The more important reason, however, is CMT's central, provocative claim that most metaphor works automatically and unconsciously.

Over the past decade, a number of discourse analysts have inspected this claim critically and drawn attention to deliberate metaphor (e.g., Cameron 2003; Goddard 2004; Charteris-Black 2004; Müller 2008; Semino 2008; Steen 2008, 2010, 2011a; *cf*. Gibbs 2011). As a result of these discussions, I have argued (2011b) that a distinction is needed between conscious metaphorical thought and deliberate metaphor use. I define conscious metaphorical thought as cases of deliberate metaphor use – in production or reception – whereby the language user pays attention to their use of metaphor for making cross-domain comparisons. This takes place in the deliberate metaphorical design of texts, products, organizations, etc. Yet awareness of metaphor *as* metaphor is not a necessary precondition for metaphor being used deliberately: the intentional use of metaphor as metaphor need not become conscious, just as many other intentional actions need not become conscious (Gibbs 2011). Deliberate metaphor affords conscious metaphorical thought but is not the same (Steen 2011b).

I define deliberate metaphor (2008, 2010, 2011a) as an instruction for addressees to adopt an 'alien' perspective on a target referent so as to formulate specific thoughts about that target from the standpoint of the alien perspective. Typically this is achieved by some form of explicit, direct metaphor, such as simile. Such metaphors are probably processed by comparison; however, this can happen without any attending awareness that the language user is dealing with metaphor.

I will first analyze the complex relations between deliberate metaphor and consciousness. Then I will frame both deliberate and conscious metaphor use in thetheory of conscious thought offered by Baumeister and Masicampo (2010). I will apply their general claim – that conscious thought is essential for facilitating social and cultural interaction – to metaphorical thought in political discourse on European integration (Musolff 2004). I will argue that not just conscious metaphorical thought *but* all deliberate metaphor use facilitates social and cultural interactions. Future research must establish which deliberate metaphors give rise to conscious metaphorical cognition, why, and to what effects.

In the final section, I will spell out the most important implications of these ideas for CMT. The power of metaphor may reside not in its unconscious use, as CMT has claimed, but in its conscious and – more generally – in its deliberate use. Essential to conscious and deliberate metaphor is that they involve observable, online, cross-domain mappings (i.e., processing by comparison); non-deliberate metaphor does not necessarily require the use of such online mappings (Steen 2008). This proposal raises new questions about the structure and function of metaphor – questions addressed in a new theory of metaphor working in new directions after thirty years of CMT (Steen 2011a).

2. DELIBERATE METAPHOR

A wonderful and well-known deliberate metaphor is found in the first twelve lines of Shakespeare's Sonnet 18, reproduced here from (Booth 1977):

> Shall I compare thee to a summer's day?
> Thou art more lovely and more temperate:
> Rough winds do shake the darling buds of May,
> And summer's lease hath all too short a date;
> Sometime too hot the eye of heaven shines,
> And often is his gold complexion dimmed;
> And every fair from fair sometime declines,
> By chance or nature's changing course untrimmed:
> But thy eternal summer shall not fade,
> Nor lose possession of that fair thou ow'st,
> Nor shall death brag thou wandrest in his shade,
> When in eternal lines to time thou grow'st.
> So long as men can breathe or eyes can see,
> So long lives this, and this gives life to thee.

Sonnet 18 offers an extended metaphorical comparison that introduces all the important characteristics of deliberate metaphor (Steen 2010, 2011a). Deliberate metaphor is *metaphorical* because it maps correspondences from one conceptual domain to another. It is *deliberate* because it involves people using metaphor *as* metaphor: it makes intentional use of something to think about something else. In Sonnet 18, this is made linguistically explicit in the subtly playful first line, 'shall I compare thee to a summer's day?' Seemingly, the poet intentionally presents a metaphorical taunt to himself, then rises to the challenge by producing a brilliant exercise in figurative thinking. Deliberate metaphor involves paying attention to a source domain during online production or reception, in order to engage in cross-domain mapping – whether this comparison targets external resemblance or proportional analogy, includes irony or overstatement, is new or conventional, etc.

All of this contrasts sharply with non-deliberate metaphor, as when one uses spatial prepositions to talk about e.g. time ('*in* 1999') or emotions ('*in* love'). When encountering such expressions, people do not pay attention to space to think about time or emotions. It is quite possible that people do not even activate concepts of space in unconscious processing. How much unconscious, automatic metaphor processing is based on online cross-domain mapping remains an open empirical question, even though it is a central tenet of most cognitive-linguistic research on CMT. The alternative view holds that language users may simply disambiguate the preposition *in* lexically before starting to build conceptual structures – and not set up cross-domain mappings in unconscious cognition at all (Steen 2008, 2011a). Much processing of metaphorical language may take this form. Just because the linguistic structures are metaphorical does not mean that the cognitive processes must be, too.

Deliberate metaphor is based in online comparison. Its function is to change the addressee's perspective on some referent in the discourse: a matter of what is attended to, and conceptually represented, during processing. In the first line of Shakespeare´s sonnet, readers cannot avoid

attending both to 'lover' and 'summer´s day': the language instructs them to represent both when they process the sentence in working memory. As I will show, non-deliberate metaphor is different.

Building cognitive representations of deliberate metaphor *as* metaphor – including shifting one's perspective from a target-domain referent to a source-domain perspective on that referent – may, or may not, be recognized by language users as ´doing metaphor´. When this does happen, it leads to metaphor recognition and, hence, conscious metaphorical cognition. Spontaneous metaphor recognition is possible because deliberate metaphor forces people to shift their attention away from the target domain referent and adopt another referential standpoint created by a deliberately introduced 'alien' concept – then use that as a source from which to re-view the target. In Sonnet 18, the source and target referents are explicitly juxtaposed in the first line. The following lines verbally thematize a selection of the many potential correspondences between the two domains. These cross-domain mappings are the focus of attention when people read the text – allowing them to recognize the references as involving metaphor and so producing conscious metaphorical cognition. Yet this is not an obligatory consequence of processing deliberate metaphor. It is more correct to claim that deliberate metaphor affords conscious metaphorical cognition (Steen 2011b).

Before proceeding to elaborate the relationship between deliberate metaphor and conscious metaphorical cognition, some more ideas on deliberate metaphor are in order. Shakespeare's poetry – Elizabethan poetry in general – is full of extended deliberate metaphors, including the famous 'metaphysical conceits'. Of course, metaphors are used deliberately in all sorts of linguistic forms for all sorts of communicative purposes in all sorts of discourse. Top Gear presenter Jeremy Clarkson is no Shakespeare, but he has a web page of magical metaphors, featuring some of the most outrageous of his deliberate figurative comparisons. These typically involve overstatement and humour: e.g., 'Aston Martin DB9, that's not a race car, that's pornography' or 'this air conditioning feels like there's an asthmatic sat on my dash-board, coughing at me.' More serious instances of deliberate metaphor can be found when complex or unfamiliar topics are explained by explicit comparison with something simpler and more familiar, as in this quotation from *Time Magazine,* 17 July 2000:

> Imagine your brain as a house filled with lights. Now imagine someone turning off the lights one by one. That's what Alzheimer's disease does. It turns off the lights so that the flow of ideas, emotions and memories from one room to the next slows and eventually ceases. And sadly--as anyone who has ever watched a parent, a sibling, a spouse succumb to the spreading darkness knows--there is no way to stop the lights from turning off, no way to switch them back on once they've grown dim. At least not yet.

When the Dutch right-wing politician Geert Wilders spoke of 'a tsunami of Islamization' washing over the Netherlands, the word *tsunami* still meant what it meant before it was conventionalized as a hyperbolic version of metaphorical *streams* or *floods*. He deliberately – quite possibly, consciously – invoked the image of recent natural catastrophe in Indonesia and its neighbouring countries as the source domain to look at the development of Islam in the Netherlands. His goal was to appeal maximally to fear and have maximal persuasive effect on the right wing of Dutch politics.

Deliberate metaphors occur in a wide range of linguistic forms and conceptual structures and serve a wide range of communicative functions. Their analysis is a prerequisite for understanding which deliberate metaphors typically elicit conscious metaphorical thought, and when. Their linguistic form may range from a single word or phrase to a clause, a paragraph, or even a complete text. They may invoke local wisdom in the form of a saying or proverb, a novel insight, a joke, or another conspicuous rhetorical ploy. They may present extended metaphorical comparisons within or between paragraphs or speech turns for purposes of explanation and instruction, encompassing metaphorical models expressed in such conventionalized text forms as fairy tales, allegories, parables, and myths: all are diverging forms of deliberate metaphor, in which the sender asks the addressee to change perspective and intentionally look at something in terms of something else.

The conceptual structures of deliberate metaphors are not necessarily or even typically novel (Müller 2008), as Semino (2008) suggests – or opposed to conventional metaphor, as Cameron (2003) suggests. The 'tsunami of Islamization' is nothing but an exaggerated version of the conventional conceptual metaphor by which large quantities can be expressed as streams of liquid: one often used by right-wing politicians to talk about immigration (Charteris-Black 2006). Similarly, descriptions of Alzheimer's disease in terms of lights going out in a house evoke a concrete image of the conventional conceptual metaphor by which understanding is compared to seeing. Overall, 99% of metaphors are conventional (Steen, Dorst, Herrmann, Kaal & Krennmayr 2010; Steen, Dorst, Herrmann, Kaal, Krennmayr & Pasma 2010), meaning that the bulk of deliberate metaphor is conventional, too. It typically involves the phenomenon of *revitalization* (Müller 2008), which has been neglected in CMT but might offer one reason why deliberate metaphor can be so powerful.

The communicative functions of deliberate metaphor are diverse, as the above examples illustrate. Somehow, they must be related to the situated genre event within which the deliberate metaphor is used (Steen 2002, Semino 2008). Depending on how *communicative function* is defined, deliberate metaphor may function to signal a particular style (e.g., the way Jeremy Clarkson talks) or register (e.g., the language of the novel) of a particular discourse event, its content (e.g., a scientific topic), its type (e.g., a type of narrative or argument), its goal (e.g., persuasion, information, or instruction), its domain (e.g., literature or religion), and others of its discourse aspects (Steen 2002).

The linguistic forms, conceptual structures, and communicative functions of deliberate metaphor are all part of a situated genre event in which people use language to think and to interact with each other. It is to be expected that properties of distinct genres constrain the variation of these three dimensions of deliberate metaphor (Wee 2005) – as they may of non-deliberate metaphor (Semino 2008). Wee suggests that explanatory function and a constructed source domain go together; but the Shakespearean example shows that other functions may be in play.

Awareness of the role of deliberate metaphor as metaphor – as a rhetorical ploy – may vary for genre-constrained reasons. Although it is difficult to forget that Sonnet 18 is one extended metaphorical comparison, other uses of deliberate metaphor may give rise to brief glimpses of

awareness soon submerged in the more important concerns of a specific genre event. Large-scale corpus work is needed to create sophisticated, precise models that are empirically valid and can be used in subsequent behavioural research, examining when deliberate metaphor gives rise to conscious metaphorical thought.

3. DELIBERATE METAPHOR AND CONSCIOUS METAPHORICAL THOUGHT

What, exactly, makes all these metaphors deliberate, and how does this relate to conscious metaphorical thought? An answer involves taking a closer look at the relationship between words, concepts, and referents: general linguistic and discourse-analytical notions that can usefully be related to a well-known psychological model of discourse processing by recalling the distinction between *surface text* (words), *text base* (concepts and propositions), and *situation model* (referential state of affairs as depicted by any given discourse) (see e.g. MacNamara & Magliano 2009). Approaching metaphor this way allows for a sophisticated, well-motivated picture of the distinction between deliberate and non-deliberate metaphor use in relation to conscious metaphorical cognition.

For the clearest cases of deliberate metaphor, the situation is simple: words and concepts directly posit 'alien' referents in the situation model to be constructed during online comprehension; these referents must somehow be integrated for the discourse to stay coherent (Steen 2007). The first line of Sonnet 18 establishes a cross-domain mapping by explicitly evoking and contrasting two distinct concepts with two distinct referents. In discourse-psychology terms, readers must represent the first line as surface text, text base, and situation model such that two concepts are explicitly and separately activated: the main referent – the addressee – is compared to an 'alien' referent: a summer's day.

The referents through the rest of the poem belong to these two, distinct conceptual domains. One pertains to the lover, the ostensive addressee of the sonnet; the other to a summer's day. Both are concepts in the text base and referents in the situation model in their own right. One has a different status from the other, being the 'true' referent and overall topic of the discourse: the beloved, viewed anew from the alien perspective of a summer's day. For most of the poem, the reader must compare aspects of the one referent to aspects of the other: e.g., 'more' in Line 2, the implied contrast in lines 3 and 4, etc.; if the reader does not do this, the text falls apart or loses its point. Suddenly it contains unconnected referents attended in isolation from each other.

All this is a matter of intention and attention – but not necessarily of consciousness, either on the part of the reader or the writer (Baars & Gage 2010). One may safely assume that all language use is intentional: i.e., it is goal directed, related to some knowledge- and interaction-oriented genre event such as writing or reading a sonnet. One may also assume that all language use involves attention – at least to those concepts evoked by the content words. Discourse processing – in production or reception – is an intentional form of attending to language structures, representing them at various levels in working memory as part of the developing surface text, text base, and situation model. This is not the same as conscious processing or conscious thought (Chafe 1994): what is represented in working

memory on the basis of intention and attention is *available* for conscious attention; it remains an empirical question whether – and, if so, which – aspects of cognitive representation impinge on consciousness. One factor clearly concerns the discourse structure and function of deliberate metaphor; I will now take a closer look at it.

Extended comparisons – and their shorter variants, similes – are direct metaphors (Steen 2008, 2010; Steen, Dorst, Herrmann, Kaal & Krennmayr 2010; Steen, Dorst, Herrmann, Kaal, Krennmayr & Pasma 2010). They directly express source-domain referents such as 'summer's day' or (in the Alzheimer's example) 'a house filled with lights' that the addressee cannot but represent and attend to separately. In Sonnet 18, lines three and four are presumably processed in working memory as containing a set of source-domain elements in the form of linguistic, conceptual, and referential discourse representations; all must be integrated into the target domain of the developing text. This demands attention and processing effort; it affords a concomitant degree of awareness that the alien elements are, indeed, alien; but such an affordance need not be realized. Direct metaphors are deliberate by definition. The more extended or highlighted they are or the more prominent their source-domain appearance, the greater the chance that they impinge on consciousness and elicit conscious metaphorical thought.

Direct metaphors should be differentiated from indirect ones, which constitute the typical case for linguistic expression of cross-domain mappings: 98% of all metaphor use in natural discourse (Steen, Dorst, Herrmann, Kaal & Krennmayr 2010; Steen, Dorst, Herrmann, Kaal, Krennmayr & Pasma 2010). Consider the phrase *a house filled with lights* in the Alzheimer's example: it directly indicates a referent in the source domain of buildings, used to re-view the referents in the target domain of Alzheimer's disease. The lexical unit *filled*, however, is a different metaphor: an indirect metaphor embedded in the source domain 'house' (Lakoff 1993, Gibbs 1993). My choice of terminology reflects the assumption, first, that *fill* has a basic meaning to do with putting something inside some container; and, second, that not this basic sense but some other, more abstract sense is in play in using this word in this context: something like 'equipped with from top to bottom'. The contextual sense 'equipped with from top to bottom' contrasts with the basic sense 'filled'. Semantically, the basic sense affords a mapping to the contextual sense – which is why the contextual, metaphorical meaning is called indirect (Pragglejaz Group 2007). According to CMT, the figurative sense is derived, online, by a cross-domain mapping from the more basic sense: in this case, 'put something inside some container'.

In general, indirect metaphor profiles the metaphorical or figurative sense of a word in a text; typically, the basic sense of source-domain terms remains hidden in the background, irrelevant – so the container sense of ´filled´ is downplayed. This is what differentiates indirect from direct metaphor: direct metaphor profiles the source-domain sense of a word in context; it is that sense that is needed for activating the correct concept and setting up the corresponding referent. In *a house filled with lights*, the language instructs the addressee to attend to the source domain 'house' as a genuine house.

With direct metaphor, there is always an observable, experienced incongruity between source-domain terms on the one hand and the encompassing target-domain frame on the other: e.g., a text about brains that suddenly talks about the lighting in a house. Because the incongruity is semantically and referentially observable, direct metaphor may be called deliberate: it is an intentionally constructed mapping between two semantic and conceptual domains. It *deliberately* uses metaphor as metaphor. The source-domain concept of *house filled with lights* is ineluctably present in the language user's discourse representation and attention; this, in turn, affords conscious metaphorical cognition.

With indirect metaphor, linguistic incongruity only arises if one assumes that a metaphorically used word like *filled* is approached via its basic sense. Only then does one have a comparable situation to the one with direct metaphor: only then is there an incongruity or referential clash between 'putting something inside a container' and the lighting of a house. When linguists identify indirect metaphor in natural discourse, they assume the priority of basic senses (see e.g. Charteris-Black & Ennis 2001; Cameron 2003; Charteris-Black 2004; Pragglejaz Group 2007; Semino 2008; Steen, Dorst, Herrmann, Kaal & Krennmayr 2010; Steen, Dorst, Herrmann, Kaal, Krennmayr & Pasma 2010). Yet such an assumption is highly questionable for describing the way language users process words when reading a text. Indeed, Rachel Giora (2003) has shown that the distinction between basic and metaphorical senses does *not* drive the psycholinguistic process of lexical access in a way that prioritizes basic, concrete, literal senses. Instead, the most salient sense of a word, in context, gets privileged in extremely rapid fashion, and 'most salient senses' emphatically include conventionalized figurative senses. Prioritizing the basic sense of a metaphorically used word may be adequate for technical metaphor identification and analysis, but it clearly is not what people do when they process metaphor in reading or listening.

Quite possibly, most words that may be identified as metaphorical from a linguistic perspective are disambiguated in processing at the linguistic level, the appropriate contextual and metaphorical senses getting rapidly privileged over other, more 'basic' ones, simply because they are the most salient (Steen 2008, 2011a). This could be why many indirect metaphors are not experienced as metaphorical or deliberate, let alone as giving rise to conscious cross-domain mappings: they may not trigger any metaphorical cross-domain conceptual mappings in the first place. I suggest that this is the case for the indirect metaphor *filled* in 'imagine your brain as a house filled with lights': *filled* gets disambiguated lexically, then activates the abstract concept 'equipped with from top to bottom' without any detour via some more basic spatial concept pertaining to containers.

(In)directness and (non-)deliberateness are orthogonal variables (Steen 2011a; *cf*. Müller 2008), pertaining respectively to the linguistic form and communicative function of metaphors. Metaphors can be expressed in forms that are direct or indirect; independently, they can be used deliberately or non-deliberately. This explains how indirect metaphor can be used deliberately. In the passage on Alzheimer's disease, one finds a number of indirect but deliberate metaphors. Once the reader has

processed the first three sentences, *Imagine your brain as a house filled with lights. Now imagine someone turning off the lights one by one. That's what Alzheimer's disease does.*
the fourth sentence moves into indirect metaphor: 'it turns off the lights so that the flow of ideas, emotions and memories from one room to the next slows and eventually ceases'. The metaphor is indirect: the construction *it turns off the lights* sets up a referential situation where Alzheimer's disease ('it') slows down the flow of ideas. The contextual meaning of *turns off the lights* is indirect, designating referents in the target domain 'slow down the flow of ideas'), not the source domain 'turn off the lights'. At the same time, the indirect metaphor is clearly deliberate.

Deliberate metaphor affords conscious (metaphorical) thought because source and target domain concepts are separately activated and attended to in working memory. They are metaphorically related concepts and referents coming from distinct domains and co-occurring in one utterance. This deliberate juxtaposition, which sometimes happens with indirect metaphor, may be inherent to direct metaphor. When, exactly, deliberate metaphor – indirect or direct – elicits conscious metaphorical thought is a separate question.

4. METAPHORICAL MODELS IN SOCIAL AND CULTURAL INTERACTIONS

Baumeister and Masicampo (2010) have recently offered a new, general theory of conscious thought that presents an opportunity to frame the above proposals in a more encompassing, independently motivated approach to cognition. They describe conscious thought as simulation of events, especially for future use in sociocultural interactions. Conscious thought constructs sequences of idea units that are typically applied to situations away from the here and now: past (conscious remembering) and future (conscious planning), as well as counterfactual (conscious reasoning), imagined (conscious design), and desired (daydreaming). The proposal fits within Tomasello's (1999) evolutionary perspective on the development of human cognition, according to which 'culture transformed primate cognition into human conscious thought' (2010: 952). It can be framed as well in such general models of attention and consciousness as the one expounded by Baars and Gage (2010).

Although Baumeister and Masicampo do not make the connection, their theory bears fundamental resemblances to Wallace Chafe's (1994) account of consciousness and its relation to language, cognition, and communicative discourse. Both theories are indebted to Baars (1988, 1997). Like Baars, Baumeister and Masicampo take conscious thought as a workspace or 'theater', not just for dealing with the here and now but – again – for simulating events away from the immediate present: 'conscious thought enables the processing of information from culture so that the human mind can operate within it' (2010: 955). Compare this with what Chafe (1994: 38-39) writes:

> Consciousness, then, is regarded… as the crucial interface between the conscious organism and its environment, the place where information from the environment is dealt with as a basis for thought and action as well as the place where internally generated experience becomes effective – the locus of remembering, imagining, and feeling. It might not be too much to say

> that the purpose of both behavior and thought is to satisfy the interests of the organism as they are represented in that organism's consciousness.

Deliberate metaphor requires attention in working memory to certain aspects of a source domain; this is done to provide a new, external perspective on some target-domain referent. Baumeister and Masicampo would see it as an instance of conscious thought, either for inner reflection or social interaction, that may arise in isolated thoughts but is more typically embedded in encompassing conceptual structures that amount to narration, argumentation, or other trains of thought. Although many issues remain about what counts as conscious thought – including the presence or absence of awareness that one is dealing with metaphor as metaphor – Baumeister and Masicampo´s framework provides opportunities for further developing the above proposals regarding deliberate metaphor.

Crucially, what is initially available for conscious thought about a deliberate metaphor, at the first moment it is used in discourse, is not the complete cross-domain mapping in all its conceptual detail. What is available is only the proposition that expresses the mapping: consider the 'tsunami of Islamization' or the first line of Shakespeare's Sonnet 18. As the previous section suggests, a potentially conscious metaphorical idea is a proposition available to working memory; it needs to be represented as a metaphorical idea in the text base and situation model capturing the ongoing discourse (Steen 2011c). The initial limitation of attention – to just the proposition expressed – is the reason why some (or many) deliberate metaphors require elaboration – either by the same speaker, in the form of a story, an argument, etc., or by other speakers through questions, comments, or critiques. Social interaction and public discourse provide the platform where this elaboration into partially and publicly shared metaphorical models takes place. Explicating the meanings of some metaphorical mappings is hard work indeed: it requires time – sometimes extending into years – and can often go in unexpected or even contradictory directions (Billig & MacMillan 2005).

This analysis reveals the complex interaction between three realities that always partake in discourse: (a) semiotic meaning potential, (b) unconscious and conscious cognition, and (c) social interaction (Steen 2011a). The engine of this trilateral interaction may lie in logical reasoning. Logical reasoning enables working with thought sequences: it '…greatly increases the practical value of information. It enables the mind to realize new truths based on information it processes. Thus, one bit of informational input can lead to multiple useful conclusions' (Baumeister & Masicampo 2010: 953-954). In the case of deliberate metaphor, this can happen in monologic discourse, in connection with argumentation (Shakespeare) or exposition (Alzheimer's disease). It is the basis of much discourse-analytical work in CMT (e.g. Semino 2008), which has emphasized the power of metaphorical reasoning from the start; but that research typically has not considered what is specific to the deliberate or conscious nature, power, and danger of metaphor. The work of Baumeister and Masicampo allows that basic picture to be refined, showing how conscious metaphorical thought facilitates social and cultural interactions. Not just the conscious use of deliberate metaphor has this

effect: so long as the language makes clear that online comparisons are inevitable, all deliberate metaphor has the same function.

Andreas Musolff's (2004) work on metaphor in political discourse on Europe is quite revealing. He focuses on the way various conceptual metaphors have framed public debate about European integration. He is not a typical representative of CMT, by any means: he has consistently argued against CMT's 'unconsciousness' and 'automaticity' claims in relation to political discourse. Given his approach to discourse, he has not thematized the difference between deliberate and conscious metaphor on the one hand and non-deliberate, unconscious metaphor on the other. He assumes metaphor to be a conceptual product of and influence on people's thoughts, attitudes, and argumentation strategies without further differentiating how it works in (un)conscious thought in individual minds. For my purposes, however, most of the metaphors that Musolff studies can serve as crystallization points for logical reasoning about possible future cultural scenarios – which normally would make them deliberate and potentially conscious. A brief glance at his data shows this to be correct, as I will now illustrate.

The first empirical chapter of Musolff's monograph deals with metaphorical conceptualization of nation states as persons, which facilitates thinking about political alliances as marriages, family relationships, etc.; for example (Musolff 2004: 28):

> Within the LOVE-MARRIAGE scenario, British media often comment almost triumphantly on apparent *marriage problems* of the Franco-German *couple* that might lead to a *breakdown* or gradual *cooling down of the partnership* and provide Britain with a chance to establish a *ménage à trois*.

Many of the examples leading to this conclusion involve deliberate metaphors that expressly exploit the available conceptual possibilities of the metaphorically used LOVE-MARRIAGE scenario. They do so to think, talk, and communicate about a complex political situation in the more familiar terms of a marriage or family relationship. Here is one quoted excerpt where metaphorical comparison is inevitable (Musolff 2004: 27):

> The pound's *shotgun separation* from the exchange rate mechanism is proving painful for both Britain and the rest of Europe. *The two-year marriage itself was unhappy…. As in most marriage break-downs, there have been faults on both sides.* Sterling and the German mark – both big internationally traded currencies – were always going to be *uneasy bedfellows*….

For all its differences, this analysis is still compatible with CMT. What Musolff has *not* noted is that the important workings of metaphor in discourse may be due to its deliberate rather than non-deliberate use. This is even possible allowing for diverging attitudes and viewpoints on the same topic in the British and German press. In this type of public discourse, metaphor operates by a typically *deliberate* exploitation of the semiotic potential of the metaphorical conceptual and linguistic systems *as metaphor* – quite likely in the conscious thought of the reporter and quite possibly in the conscious thought of their readers, who realize new metaphorical perspectives for sociocultural interaction.

Consciousness of metaphor and its deliberate use for rhetorical and argumentative purposes in the service of political and cultural ends does, briefly, become an explicit theme at the start of the second empirical chapter. Musolff draws attention to Margaret Thatcher's awareness of metaphor, as reported in *The Times* of 31 October 1992. 'Misleading analogies such as the *European train leaving the station* have been used in the debate, she says. *"If that train is going in the wrong direction it is better not to be on it at all.* The Newspeak of Orwell has returned as EMU speak*"'* (Musolff 2004: 30).

Skilful orators have no problem turning misleading analogies inside out to become similarly misleading analogies in the opposite direction. This is where logic and conscious thought make use of deliberately metaphorical propositions to develop entire metaphorical scenarios and arguments that lead people to novel perspectives and standpoints. As Musolff shows throughout the chapter – which goes on to explore the metaphorical application of a JOURNEY scenario in political arguments over political integration – such a metaphorical model is not only available but, indeed, widely and often consciously exploited in the rhetoric of politicians and the media, all of whom all attempt to use it for their own purposes (2004: 60). If the metaphorical model is contested – as typically happens in this arena – it can be used in critical and subversive ways in public debate (2004: 61). This commonly involves a form of deliberate metaphor. In spite – or because – of its deliberate use, a contested metaphorical model keeps exerting power over argumentation and argumentative conclusions, including conscious thought and the political and other actions that follow (2004: 61).

In a later chapter dealing with Europe as a BODY POLITIC, Musolff demonstrates how the use of contested metaphorical models with their pithy, catch-phrase expressions can, over time, become the topic of multi-party discourse. Although he does not point this out, deliberate, possibly conscious metaphor use turns out to be the crucial explanatory factor in this process.

> In the course of the public debate within a discourse community, micro-traditions of metaphor use emerge, in which specific scenarios and special formulations (e.g. *premature birth, being at the heart of Europe, Eurosclerosis, the sick man of Europe*) become the foci of further extensions, variations and reinterpretations. These emerging traditions culminate in `conceptual contests`, in which no major participant in the public debate can afford to remain silent; hence a sudden inflation of tokens for the respective scenarios in the corpus at particular points in the discourse history of that community. Some of these contests become so prominent that they are reported in a neighbouring discourse community (such as the British claims of being *at the heart of Europe* that were commented on in the German media) (2004: 112-3).

Later (2004: 147*ff.*), he develops this into an analysis of what he calls ´metaphor negotiation´. The dynamics of deliberate and non-deliberate metaphor in language, thought, and communication comprise nothing less than a *discourse career of metaphor*, which may best be described with reference to certain cultural and historical boundaries.

The phrase *discourse career of metaphor* is coined, demonstrated, and elaborated in detail in a chapter on the development of the metaphor of the 'European house'. Once again, the composite materials comprise a large number of – clearly deliberate – metaphors requiring processing by

comparison, such as: 'Mikhail Gorbachev´s *Common European House* always raised heckles (*as anyone who has ever shared a flat with a large, aggressive, rather untidy person with little money will understand*)' (2004: 134). Many of these deliberate metaphors express metaphorical models that are contested so intensely that they evolve into their opposite equivalent: the value and attitude they initially represent in political argument gets turned inside out. The 'European house' was launched as a positive image of the European integration project but later became a house whose building plans were seriously flawed. Conscious metaphorical thought enables people to spell out hitherto implicit entailments; in turn, these can be used to criticize the model and either exploit it in another – sometimes even opposite – way or abandon it altogether.

This is how deliberate metaphor affords conscious metaphorical thought, which then facilitates sociocultural interactions – as one would expect deliberate metaphor relates to the general functions of conscious thought described by Baumeister and Masicampo (2010). Not only does this happen with the contested metaphorical models Musolff describes, but also with the time course of official metaphorical models in e.g. education and science, implicit metaphorical models in low and high culture, and emerging metaphorical models in institutional and more private settings (Steen 2011a). This is precisely where the linguistic (or semiotic) dimension of symbolization, the individual (or psychological) dimension of (un)conscious thought, and the interpersonal (or social) dimension of interaction come together, leading to the development of new metaphorical models in discourse; these, in turn, feed into culture, including the macro-domains of science and education, literature and the arts, the mass media, and professional and personal life. They can also feed back into language, individual thought, and social interaction. For this to happen, all these parameters are required in one complex configuration of discourse events. Through these processes, metaphorical models affect the dynamics of culture and history – and, perhaps, even evolution.

5. IMPLICATIONS FOR CONCEPTUAL METAPHOR THEORY: FROM CONCEPTUAL TO DELIBERATE METAPHOR

For sake of argument, I suggest evaluating CMT in relation to deliberate and conscious metaphor starting from the following challenging supposition: at any moment in recorded modern culture and history, thought-based metaphor begins with deliberate metaphor, which may impinge on consciousness. As I have shown, both deliberate metaphor and its potentially conscious realization may be either quite restricted or extended. Deliberate metaphor need not be new at the moment it is used: it may well involve the revitalization of a familiar linguistic metaphor, or the coining of the novel linguistic expression of a fully conventional metaphor in thought. When this happens, deliberate and conscious metaphor triggers the inferential reasoning at the centre of discussion in cognitive-linguistic treatments of metaphor's cognitive power. However, I have introduced one crucial difference: a substantial number of these metaphorical reasoning processes are conscious not unconscious, and more often deliberate than non-deliberate.

The difference between deliberate and non-deliberate metaphor is essential. It allows for diverging – even contradictory – uses of the same conceptual structure that lies dormant beneath linguistically expressed metaphorical ideas (Müller 2008). Comparisons, carried out deliberately, can be pointed in many directions, as illustrated by numerous examples in the domain of political debate.

This theoretical differentiation allows for precise analytic engagement with the dynamics of metaphorical models playing a role in politics, education, science, business, the media, arts, literature, etc. When a particular metaphorical model has been consciously developed through a number of distinct discourse events, the conceptual connections thus created may become conventionalized and automated – and so subsequently available for unconscious use. The extraordinarily fast workings of this process have been demonstrated experimentally by Bowdle and Gentner (2005).

From Baumeister and Masicampo's point of view, the process is predictable (2010: 948): ´conscious thought is for incorporating knowledge and rules for behaviour from culture. Over time, automatic responses then come to be based on that new input´. This is exactly the position George Lakoff has promoted over the past decade in his attempts to influence the American political scene. In *The Political Mind* (2002), he basically acknowledges the need for conscious metaphor use, negotiation, and eventually intervention by means of critical discourse analysis and civic participation, to set up new metaphorical models more apt to deal with current sociocultural interactions than the old ones. He even wants people to do this as a way of renewing their brain structures. This is completely in line with Baumeister and Masicampo's views on the relation between conscious and unconscious thought (2010: 948; see also 2010: 964): 'we agree that the impulse originates in the automatic system. The role of conscious thought is to reshape… and reprogram… those automatic responses through input from culture, as well as to simulate the event mentally before doing it – perhaps also discussing it with real or imagined people.' Conscious metaphorical cognition can change one's experience of the world.

Yet this is not the whole story, because this analysis need not lead to the conclusion that the metaphorical meanings accrued by one or another linguistic expression or conceptual structure via the above processes are always, and automatically, online when metaphor is *not* used deliberately. It is this classic CMT assumption that I would like to question. In Section Three, I hinted at an alternative explanation for the use of these metaphorical structures in language, via shallow processing and lexical disambiguation of metaphorically polysemous terms (see also Steen 2007, 2008, 2011a). Consider the following proposal: the semiotic systems of language and thought indeed display many systematic metaphorical structures, but these involve meaning potential at a semiotic or symbolic level. This systematic meaning potential is abstracted from the semiotics of thousands if not millions of usage events in text and talk. It is psychologically available to individual minds as well as socio-culturally available in such public repositories as dictionaries, encyclopaedias, textbooks, and the cultural canon. At the same time, its psychological and sociocultural instantiation is likely always partial, and not full-fledged representation (Shore 1996). This is why the complete metaphorical

systems are semiotic meaning potentials that are reconstructions. The crux is that these systems are not necessarily activated during language users' unconscious cognitive processing. The full cross-domain mapping potential of any metaphor may remain dormant during regular discourse processing – unused as a cross-domain mapping – simply because people can disambiguate lexical items in fast, shallow fashion, so they do not need to consider underlying conceptual structures. Why would they go to all this trouble if they had the conventionalized metaphorical senses at their immediate disposal, too?

All of this is to suggest that metaphor in language need not give rise to metaphor in thought (in the sense of cognitive processing), as CMT has claimed. Most metaphor in language may be processed in non-metaphorical ways, raising a potential paradox (Steen 2008). A target domain may indeed get partially structured in terms of a source domain over time, as has happened for time in terms of space. This does *not* mean that language pertaining to the target domain is always still understood indirectly, via the source domain. It may be understood directly, by lexical disambiguation or shallow processing. This raises such follow-up questions as whether temporal thinking *without* language requires spatial grounding. Metaphorical models may turn out to be more a matter of semiotic or symbolic reality than individual psychological behaviour. Their metaphorical potential comes to life – is realized and developed – when a particular metaphorical expression or set of expressions (or thought or set of thoughts) is used deliberately – sometimes, but not necessarily, consciously – in a particular discourse context (Müller 2008).

Metaphor in language gives rise to metaphor in thought when it is used deliberately as metaphor – whether or not this turns into conscious metaphorical thought. This alternative account of the power of metaphor raises the question whether its *conceptual* power is as great as Lakoff and other cognitive linguists make it out to be. If people do not activate many metaphorical models during regular discourse processing – unless they are used deliberately – if most metaphor is used non-deliberately, then the effect of metaphor on people's lives may be much smaller than often claimed. Some deliberate metaphor may still have great consequences, or may have *had* great consequences historically; but that is a different research question.

6. CONCLUSION AND PROSPECTS

I have reviewed CMT's claim that metaphor is a matter of thought by reconsidering the importance of the distinction between unconscious and conscious thought. I have suggested moving the theoretical focus away from metaphor in unconscious thought – CMT's traditional concern – to conscious metaphorical cognition. Framing conscious metaphorical thought in Baumeister and Masicampo's (2010) theory of consciousness, I have argued that conscious metaphor is prompted by available metaphorical structures in thought and language. In general, observable metaphorical thought involves the deliberate use of socially available metaphorical models expressed in language or the deliberate use of linguistically available idea units that can be detected in conceptual propositions. Deliberate metaphor affords the emergence of conscious metaphorical cognition but does not demand it.

The effects of this reconsideration are twofold. First, it foregrounds the need for further work on deliberate metaphor in situated genre events: this is where the social, psychological, and semiotic realities of metaphor come together and find their concrete functional realization. Genre contexts can guide the search for deliberate metaphor's linguistic forms, conceptual structures, and communicative functions and elaborate its relation to non-deliberate metaphor, so that one can meaningfully look at metaphor contests (Musolff 2004); textual positioning and repetition of deliberate metaphor (Semino 2008); deliberate metaphor's interpersonal uptake, development, redeployment, and clustering (Cameron 2007); and metaphor awakening (Müller 2008). Degrees of metaphor awareness in ongoing discourse could then be modelled in current psychological approaches to discourse processing and related to the specifics of functional genre contexts. Such research would provide a new view on the discourse career of metaphor, which could eventually lead to a new account of metaphor's role in culture, history, and evolution. Genre events are likewise the appropriate platform for designing applied studies of metaphor as a tool for intervention – in e.g. product design, knowledge management and organization, human resource management (e.g. workplace bullying: Tracy *et al*., 2006), and ideological critique of politics (Lakoff 2002, 2004, 2008).

Second, the proposed reconsideration takes a fresh look at CMT's claims about the power of metaphor. Contrary to what CMT assumes, the power of metaphor may not lie in its widespread unconscious use but in its much more restricted and targeted deliberate – sometimes conscious – use. If so, then CMT claims about unconscious metaphor use need to be re-examined. Metaphor may largely be a matter of the history of language and thought and not play much of a role in unconscious metaphorical cognition during discourse processing. The arguments put forward in this paper stress the importance of research into the precise nature and function of special groups of metaphors that may be active in unconscious cognition – as metaphors – because they are entrenched in embodied image schemas (Gibbs 2006). They offer specific angles for future research on metaphor that makes constructive but critical use of thirty years' research on CMT.

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Understanding Timelines: Conceptual Metaphor and Conceptual Integration

One of the most broadly investigated topics in the conceptual metaphor literature is the importance of spatial construals for thinking and talking about time. We address the relationship between conceptual metaphor theory (CMT) and conceptual integration theory (CIT) by exploring how people understand timelines – both as graphical objects, in discourse about timelines taken from newspapers and the web, and in poetic examples. The inferential structure of the timeline is well captured by the conceptual metaphors TIME IS SPACE and EVENTS ARE OBJECTS. Instantiated graphically, the timeline serves as a material anchor for a conceptual integration network representing partial cognitive models of time, lines, objects, and a hybrid model known as a 'blend'. Understood in respect to this network, the analogue properties of the line give it novel computational properties facilitating inferences about the events that the timeline represents. The history of the modern timeline suggests that it reflects a distributed cognitive process, involving multiple individuals over a large span of time and illustrating the importance of cultural evolution in the development of conceptual integration networks. Analysis of both poetry and everyday discourse about timelines suggests that conventional mapping schemas are best viewed not as determining the interpretation of timelines but as providing soft constraints that help guide interpretation. Future metaphor research will best proceed via a merger of techniques from CMT and CIT, characterizing metaphor as involving complex networks of mappings that can be updated flexibly as a function of context and goals.

Keywords*:* cognitive artifacts, cognitive semantics, conceptual blending, conceptual integration, material anchors, metaphor.

1. INTRODUCTION

The publication of *Metaphors We Live By* marked a revolution in semantics and, more generally, in the understanding of the relationship between language and thought in cognitive science. In this classic work, Lakoff and Johnson (1980) urge readers to throw off the chains of formalism and rationalism and embrace a new, experientialist approach to meaning. According to conceptual metaphor theory (CMT), metaphorical language reflects metaphorical mappings, or correspondences, between conceptual domains (Lakoff & Johnson 1999). Metaphor is thus defined both as a linguistic phenomenon in which vocabulary is shared among domains and as a conceptual one in which different conceptual domains are linked by metaphorical mappings, based either on correspondences in people's experiences (Grady 1997) or

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analogical correspondences between domains (Lakoff 1993). Language is not an isolated symbolic system, independent of other cognitive processes. Rather, language is an overt manifestation of the human conceptual system, and metaphorical language, in particular, offers a window into the human mind (Lakoff & Johnson 1980).

Lakoff and Johnson's pioneering work marked the rise of cognitive semantics. Other researchers began to approach language as a cognitive phenomenon and meaning as involving the activation of concepts (see e.g. Talmy 2000). Fauconnier (1994) argues that language serves as a prompt for speakers to construct a mental representation of utterance meaning in mental spaces. On Fauconnier's model, a mental space contains a partial representation of the current scenario that includes one or more *elements* to represent discourse entities and *frames* to represent the relationships between them. Spaces partition the information evoked by a sentence into a series of simple cognitive models. Mappings between spaces capture the relationships between elements and their counterparts in other spaces. In this way, complex scenarios can be represented by positing a number of mental spaces and the connections between them.

Among other accomplishments, Fauconnier's (1994, 1997) model synthesized the insights underlying frame semantics (Fillmore 1982) and CMT, applying them to a broad range of topics including indirect reference and referential opacity. Referential phenomena accounted for by cross-domain mappings in CMT can be similarly accounted for by cross-space mappings in mental space theory: e.g., in CMT 'winning an argument' is understood via cross-domain mappings between argument and war; in mental space theory, 'winning an argument' prompts the listener to construct a mental space with a partial cognitive model of an argument and another with a partial cognitive model of war, and create cross-space mappings between them.

However, the notion of mapping is a more general notion in mental space theory than in CMT. Mappings in mental space theory can be motivated by many different factors, including analogy and identity through time – indeed, any understanding of a connection between two apparently different entities. For example, 'Iron Man wants to try directing' is understood as concerning the career goals of Robert Downey, Jr., by virtue of a mapping between one space with a cognitive model of actor Robert Downey, Jr., and another with a cognitive model of the movie *Iron Man*. Mental space theory suggests that the widespread, culturally and linguistically entrenched, cross-domain mappings described by Lakoff and his colleagues (e.g. Lakoff & Turner 1990) manifest a more general ability to establish mappings between structures in mental spaces.

Similarly, conceptual integration theory (CIT: Fauconnier 1997, Turner 1996, Fauconnier & Turner 2002) – the most recent version of mental space theory – takes Lakoff and Johnson's (1980) insight regarding the cognitive import of mappings and extends it to a vast array of cognitive phenomena. Conceptual integration is a basic, higher-order operation for combining information, said to be involved in metaphor and many other products of human cognition, such as metonymy, categorization, analogy, and

counterfactual reasoning. Fundamental aspects of CIT include (1) the idea that conceptualization involves networks of mental spaces with mappings between them (Fauconnier 1997), (2) an important role for simulation (Coulson 2001), (3) the construction of hybrid cognitive models via selective projection of structure from multiple input spaces (Fauconnier & Turner 1998), and (4) the generation of novel emergent structures (Turner 1996).

CIT is motivated in part by discoveries in cognitive science regarding the plasticity of conceptual structure. Whereas, in the 1980s, cognitive psychologists understood concepts as relatively static knowledge structures, the same researchers have come to view concepts as temporary structures in working memory (Barsalou 1993). Derived from more stable constructs in long-term memory, concepts – mental representations used in categorization and reasoning tasks – are not identical to the more stable long-term structures. CIT combines a view of concepts as inherently dynamic and situated in particular contexts with a key finding in mental space theory research regarding the ubiquity of mappings and people's ability to exploit contextually motivated mappings. In sum, CIT attempts to characterize regularities in the way concepts change in virtue of their combination with other, contextually relevant concepts (Fauconnier & Turner 2002).

In this paper, we address the relationship between CMT and CIT by exploring how people understand timelines. A cognitive artifact anchoring spatial metaphors for construing time, the timeline serves as an excellent vehicle for pointing out similarities and differences between CMT and CIT. With respect to differences, Section Two highlights CIT's emphasis on the importance of dynamic mappings and emergent structure. In Section Three, we analyze attested statements about timelines to underscore the flexible, context-sensitive way speakers recruit conceptual structure to serve their rhetorical goals. In Section Four, we turn to what many consider to be a particular forte of CIT: namely, its ability to account for novel metaphorical understandings. Analysis of a few lines of Paz's poem *Mas allá del amor* reveals a deeply creative construal of time with a non-trivial connection to the more pedestrian innovation of the timeline. Finally, in Section Five we discuss the relationship between CMT and CIT, revisiting Grady, Oakley, and Coulson's (1999) treatment of it.

2. TIMELINES

A timeline is an information visualization tool for communicating a sequence of related events. Verbal descriptions of events are arranged chronologically, displayed on a line oriented either horizontally or vertically. Timelines are frequently used by historians to depict important events in a given period and by biographers to denote important events in the life history of their subject. Figure One represents a typical timeline, both in form and content. It depicts the Eighteenth Century, the beginning of each decade serving as a temporal landmark. Important events in Benjamin Franklin's life are described in words and anchored to a locus on the timeline indicating the date at which they occurred.

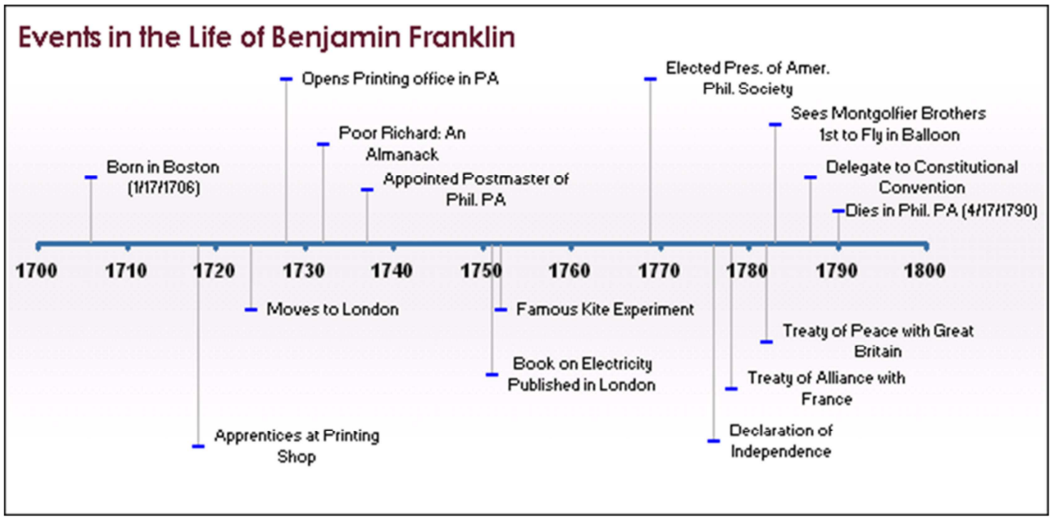

Figure 1: Timeline of Franklin's life, downloaded from www.vertex42.com/ExcelArticles/create-a-timeline.htm: an article by Jon Wittwer on how to use the software package Excel to create a timeline.

As a spatial depiction of time, the timeline conforms nicely to inferences predicted by CMT. It supports two key components of the TIME IS SPACE metaphor originally described in (Lakoff & Johnson 1980): the tenet that PROXIMITY IN TIME IS PROXIMITY IN SPACE supported by linguistic data such as (1), and the tenet that TEMPORAL DURATION IS SPATIAL EXTENT supported by examples such as (2) and (3). Moreover, the arrangement of events as objects along the timeline can be seen as an instantiation of the EVENTS ARE OBJECTS mapping of the event structure metaphor (Lakoff 1993).

(1) Those two events happened very *close* together in time.

(2) The war lasted a very *long* time.

(3) The life of a butterfly is incredibly *short*.

CIT is required to explain the composition of TIME IS SPACE and EVENTS ARE OBJECTS (Lakoff & Johnson 1999) in one's understanding of timelines. Table One outlines the recruitment of conceptual structure from multiple domains; mappings are indicated by their occurrence on a common row in the table.

Time	Linear Extent	Objects	Ben Franklin's Life	Timeline Blend
Year	Line Segment			Year/Line Segments
Temporal Succession	Spatial Ordering			Left-to-Right Ordering
Date		Tick Mark	Salient Event	Tick Mark/Event

Table 1: Mappings in the 'timeline' blend. Each column represents a mental space. Entries in the table are either elements or relations. Entries that occur on the same row are mapped to one another.

The resultant blended object has an inferential structure well described by the above metaphors: temporal duration is expressed via spatial extent; temporal disparity of events is expressed via the spatial proximity of two tick marks on the line; temporal succession is conveyed via spatial ordering. That said, meanings of the timeline exist that cannot easily be explained by these binary mappings alone.

2.1 Emergent structure

One major difference between CMT and CIT is the way CIT highlights the emergent structure that arises in many metaphorical construals (Coulson 1996, 2001; Fauconnier & Turner 1994, 1998, 2002). In CMT, metaphor involves a set of correspondences between aspects of relevant source- and target-domain concepts; novel metaphorical construals of the target domain originate in the projection of inferences from the source domain (Lakoff 1993). In CIT, metaphor involves the integration of structure from multiple inputs, including extant construals of the target domain. The complexity of integration varies from the relatively straightforward case of *single scope* networks, which involve the projection of inferences from the source input as in CMT, to *double scope* networks, which involve the projection of inferences from the blended space (Fauconnier & Turner 2002). Because double-scope networks involve a blended space incorporating relational structure from at least two inputs, they afford construals that differ both from those available in the source domain and from extant construals of the target domain: that is, they represent emergent structure. Accordingly, the timeline has properties distinct from those of the cognitive models in each of its input spaces.

The timeline in Figure One derives some structure from the 'linear extent' input: the constituent line segments; and some from the Ben Franklin's Life input (the events referred to in the labels). It also has properties that derive from its communicative function, its use as a learning or organizational tool, and its elaboration via a set of criteria: i.e., the selection of the depicted events as the most relevant. Although it instantiates the mappings inherent in the TIME IS SPACE metaphor, the timeline is an integrated construct whose computational affordances differ from those available in the input domains. Studying the timeline in Figure One might enhance one's memory for the sequence of salient events in Franklin's life or allow one more easily to recognize Franklin's most productive periods, via the density of points. Researchers in the field of information visualization recommend using timelines, because their visual properties facilitate inferences about temporal events – such as temporal and causal contingency – that are either difficult or impossible to make using different representational formats (Phan *et al*. 2005).

CIT also provides a useful description of timelines as examples of *compressions*. Fauconnier and Turner (2000, 2002) define compressions as cases in which elements from different input spaces in an integration network are mapped to one or more elements in the blended space. Whereas the elements in the inputs relate via *inter-space* relations, those in the blended space relate via *intra-space* relations. In Figure One, each event on the timeline – being born, flying a kite in a thunderstorm, publishing *Poor*

Richard's Almanac – can be conceptualized in its own mental space. Compression affords the conceptualization of all these events within a single mental space as tick marks co-existing on the timeline. Whereas the input events relate to one another via the inter-space relation of temporal ordering, the tick marks relate via the intra-space relation of spatial succession.

The compression in Figure One results in emergent structure that proves to be quite useful. In the separate spaces for each event in Franklin's life, events have different durations and can be considered separately: moving to London or serving an apprenticeship take longer than being born or dying even though, in the timeline construal, they do not: all salient events are identical objects represented with the same tick mark. So the numerous works, deliberations, meetings, etc., eventually culminating in the Declaration of Independence are compressed into one event-object on the timeline. Extended events such as the apprenticeship, shorter events such as the kite experiment, and instantaneous events such as Franklin's appointment as postmaster are all included as analogous elements belonging to a single category in which only saliency matters; differences in duration and complexity are left unrepresented.

Research in CIT has shown that compressions reduce conceptual complexity, facilitate inference, and afford novel affective reactions (Coulson & Pascual 2006). CIT goes on to describe regularities in patterns of compression, such as compression from disanalogy to change, from analogy to identity, and from identity to uniqueness (Fauconnier & Turner 2002). Indeed, much of the timeline's emergent structure, as well as its novel computational properties, results from the compression of temporal relationships to spatial ones, together with the congregation, in the blended space, of structures from multiple input spaces.

2.2 Timelines as material anchors and cultural artifacts

The timeline *qua* visual object is also an excellent example of a *material anchor*. Hutchins (2005) details the way many blends involve an input space constituted by a material object: often a cultural artifact; he refers to such input spaces as material anchors. So a queue of people waiting for theater tickets can be construed as a blend between two inputs: the physical configuration of people in the line – the material anchor – and a trajector moving through space in a particular direction. Integration of these in the blended space yields the emergent property of the queue as an ordered sequence of people moving in a particular direction: from the 'back' of the line to the 'front'. The perceptually salient material anchor provides stability to the blend and reduces individual cognitive load (Hutchins 2005).

The culturally sanctioned understanding of a queue as e.g. determining the order in which participants will be able to purchase theater tickets relies on this blend. The blend itself is possible because of the cultural practice of queuing; perhaps the main way the concept is learned is via participation in that practice. The importance of cultural factors such as material artefacts and cultural practices is a major theme in CIT; it helps explain how incredibly complex integration networks can be used by individual members of a culture despite their limited attentional and working-memory resources (Fauconnier &

Turner 2002). Indeed, metaphorical construals of time have been shown to involve a series of successive integrations, often involving the automating of once-creative blends (Fauconnier & Turner 2008).

Metaphorical language implying a linear conception of time is common to many times and cultures. Nevertheless, the timeline in its modern form seems to date from just a few centuries ago. Grafton and Rosenberg (2010) provide a thorough history of the timeline, with abundant illustrations of its instantiations as well as the numerous, less felicitous attempts that preceded it. They describe a long, arduous process by which historians repeatedly tried to create a way to represent temporal events visually. Intermediate steps in this process included chronological tables, human and animal bodies as representations of time periods (e.g., the Persian Empire could be the lung because, under Darius, Jews could 'breathe' freely), and geographical maps of time instead of space. Finally, in the second half of the Eighteenth Century, Joseph Priestly proposed the modern version of the timeline, integrating spatial and temporal relations. The timeline grew rapidly in popularity: its use was widespread within a few decades. People were surprised by its simplicity and wondered why it had not been thought of before.

Many cultural constructs like the timeline look obvious in retrospect, masking the way useful integrations often go unnoticed even by highly intelligent and innovative individuals. In discussing a closely related blend – the number line – Núñez (2009) notes that human beings had sophisticated knowledge of mathematics for thousands of years before inventing the number line in Seventeenth Century Europe. Archeological records suggest that the Babylonians had advanced knowledge of number bases, fractions.Moreover, Babylonian clay tablets contain diagrams used to help estimate square roots (Fowler & Robson 1998), suggesting that the Babylonians were aware of potential mappings between numbers and spatial forms, but no number line. Analogously, awareness of the potential mapping between spatial forms and time did not lead to the integrated concept of the timeline.

The emergence of useful cognitive artifacts such as the timeline is a gradual process involving multiple individuals and iterations (Hutchins 1995). The entrenchment of an innovative blend through cultural evolution has been described in detail for such cases as complex and imaginary numbers (Fauconnier & Turner 2002, Fauconnier 2005). Integration networks become widely shared in a culture because they can be used to construct relevant meanings at comparatively low cognitive cost. On most occasions, this success comes only after many failed or less felicitous integrations. Although the timeline appears to the modern observer as a 'natural', straightforward way of representing temporal continuity and relatedness, its invention is fairly recent and represents a remarkable conceptual achievement. As in the case of complex numbers, the timeline is an excellent example of the diachronic aspect of blending; it illustrates the extent to which conceptual integration is a distributed cognitive process involving multiple individuals over a large span of time.

2.3 Varieties and uses of timelines

The timeline, with its emergent properties, results from compressing spatial and temporal relations into one-dimensional space. The compression procedure can recruit any appropriate object to instantiate the linear schema. The object – with relevant length and irrelevant width – becomes a material anchor for the timeline blend whose affordances can be opportunistically exploited.

In a timeline outlining Lego's corporate history on its fiftieth anniversary, pictures of popular Lego toys were placed on the timeline at the date of their release. The significance of the pictures is readily understood via contextually motivated metonymic compression: the toy stands for its release and, hence, all its counterparts. A conventional TOKEN FOR TYPE mapping helps motivate the MANY-TO-ONE compression. At the same time, it is not at all conventional for a picture of a toy to represent the toy's release. That mapping is motivated by its relevance for the timeline.

Conventional mapping schemas are best viewed not as determining the interpretation of timelines but as providing constraints that guide interpretation. In the Lego example, the timeline was itself constructed from a series of Lego blocks laid end to end. In contrast to the picture of the original Lego blocks from 1958, the viewer understands that the linear arrangement of blocks does *not* correspond to the invention of those blocks but to time itself. This suggests that the TOKEN FOR TYPE mapping is not just applied reflexively; its use is influenced by aspects of the context, including the spatial configuration of pictures on the page. Spatiality – in other contexts a general factor in interpretation of metonymies – assumes special prominence in the context of timelines because of graphical conventions for their construction.

CIT provides a framework that readily accommodates contextual variability in instantiating different timelines. The same software used to create Figure One can be used to construct timelines for future events: another common use of timelines. For example, Lori Dector Wright posted a timeline of events for a wedding in a blog entry on http://loridector.com[1], intended to be included with wedding invitations. The timeline depicts important events, such as 'Guests arrive at Resort', 'Oceanfront Ceremony begins', 'Drinks & Pupus by the Pool', and 'Dinner Buffet'. Interestingly, all events are given the same amount of space on the timeline, even though they vary in duration from thirty minutes to five hours. In Figure One, space relates iconically to temporal duration with respect to both ordering and spatial extent. By contrast, the space-to-time mapping in the timeline of events at a wedding preserves the topological correspondence but not the metric: that is, left-to-right ordering of events maps faithfully onto the temporal ordering of wedding events; however, the mapping between spatial extent and temporal duration is absent: the same spacing separates each event. This is often the case in timelines for future events, where the sequence of events is often what matters.

[1] Note that, as of 9 October 2013, the website is offline.

Of course, CMT advocates will be quick to point out that mappings are highly selective and need not include all aspects of the source domain. That said, the appeal of CMT is its putative generality, and the way the same mappings – e.g., between lovers and travelers – underlie numerous expressions classed under a single metaphor: LOVE IS A JOURNEY. In the case of timelines, Figure One suggests an entrenched mapping between spatial extent and temporal duration, while the wedding timeline suggests that this mapping is not obligatory. As in the case of the conventional metonymy discussed above, the conceptual metaphor does not determine the timeline's interpretation but rather serves as a soft constraint, subject to the user's goals. With timelines, these goals usually privilege saliency and sequential order rather than duration. Whereas CMT suggests that metaphorical expressions and images, such as graphs, are interpreted via a static set of mappings, CIT says that their interpretation involves a more complex network of mappings that can be updated flexibly as a function of context and goals.

3. CUTTING, COMPRESSING, AND ACCELERATING TIMELINES

Emergent properties of the time-space blend affect not only the timeline as symbolic object, but also the way that spatial vocabulary is recruited to describe it. Below we discuss how attested statements about timelines incorporate mappings between spatial extent and time (Section 3.1) and between motion and time (Section 3.2).

3.1 Spatial extent

Consider Example (4), from a news story about the potential impact of software on drug design (*Drug Week* 2 April 2010, p. 3478: 'Apriso joins Dassault Systems Software partner community'; *emphasis added*) [http://www.apriso.com/company/news/press_releases/Mar_17_2010_Dassault_Systemes.php]:

(4) This new combined solution addresses the challenge of sharing information between design and planning and production execution…. Design timelines can be *compressed*, products can be accelerated and overall quality can be elevated.

In many ways, (4) exemplifies the sort of linguistic data that motivates CMT. It involves a mapping from a concrete source to an abstract target: a verb describing physical transformation ('compression') has been applied to the abstract domain of scheduling. It can be seen as one instantiation of a more general pattern of mappings between spatial and temporal relationships. Inferences regarding physical compression find analogues in the temporal domain. The result of physical compression is a smaller object with greater density. Analogously, events on the new timeline occur in more rapid succession: their duration is reduced relative to the old timeline.

CIT suggests that this analogy is mediated by a blended model with links both to physical compression and the scheduled events. The timeline's spatiality affords its construal as something that *can* be physically transformed. Entrenched mapping schemas can then be used to interpret the implications of the timeline's physical transformations for the abstract domain of scheduling. Compression makes the timeline shorter, mapping onto the reduced duration of events. At the same time, compression results in a greater density of points on the timeline, mapping onto the more rapid succession of events. Notice, however, that the scheduled events in (4) are not construed via a general notion of compression but rather a specific sort of compression applied to timelines. This is why the compressed timeline is not bent but retains its original shape. The blending in (4) conforms to a regularity pointed out by Fauconnier and Turner (2002): the *disanalogy* between the length of the two timelines – before and after adoption of the software – maps onto change in the blended space in which one talks about compressed timelines.

Disanalogy likewise maps onto change when people talk about *cutting* timelines – as in (5), from an article about zoning-law changes for high-density housing projects such as large apartment buildings proposed for urban areas well supported by public transportation (*The Courier Mail*; Brisbane, Australia; Thursday, 18 March 2010 p. 10: 'Fast-track plan in "go zones"'; *emphasis added*).

(5) AREAS close to public transport corridors will become 'go zones', effectively allowing state and local governments to fast-track approval of high-density developments…. The planning timeline would be *cut from years to months* in 'go zones'.

Consistent with the mapping between spatial extent and temporal duration identified by CMT researchers, the reduced length of the 'cut' timeline entails a corresponding reduction in the duration of the planning process discussed in (5). Interestingly, whereas cutting the latter half of a 60″ measuring tape leaves one with a scale of 0-30″, cutting the timeline need not imply omission of any events it depicts. Rather, cutting the timeline 'from years to months' implies revising the mapping between tick marks on the timeline and temporal units in the time space. In the blend, 'cutting' the years means transforming them into months, as manifest in the writer's use of the construction 'from… to' with the verb *to cut*. Event objects spaced years apart on the former timeline are now spaced months apart.

Similarly, (6) illustrates a change to a timeline that maps onto a reduced period for drug development process (*Drug Week* 2 April 2010, p. 3632: 'Global alliance for TB drug development: Global partners join forces to speed development of new TB drug combinations'; *emphasis added*) [http://www.highbeam.com/doc/1G1-222084889.html]:

(6) 'By working together, CPTR partners can *take years off* the drug development timeline for safer new TB drug regimens', said Dr. Raymond Woosley, President and CEO of the Critical Path Institute.

In (6) a temporal unit – years – occurs in the 'length' slot of a construction often used to describe removal from a container or surface: e.g., cutting hair, as in 'take a couple of inches off the back'. Here, as in (5), eliminating years from the timeline does not mean omitting any events planned for those years, but rather preserving their relative positions in a new, shorter timeline. As in both (4) and (5), the grammatically cued change construal ('take years off') maps onto a disanalogy between the duration, in the input spaces, of the original and new timelines.

In other cases, cutting a timeline *does* imply the omission of planned activities. Consider (7), from a news article about the UK's Royal Air Force (RAF) (*Aerospace Daily & Defense Report* Thursday, 1 April 2010 [**234** (1)], p. 3: Barrie, D., 'More RAF C-130Js unlikely despite A400M delay'; *emphasis added*).

(7) The RAF already has been forced to reduce the anticipated service life of some of its C-130Js by three years as a result of greater than anticipated use. When first acquired, the aircraft were expected to remain in service until 2030. However, higher operational utilization in more demanding environments has *cut that timeline* to an estimated out-of-service date of 2027.

In both (5) and (7), the disanalogy between the original and the revised timeline is compressed – in the sense of (Fauconnier & Turner 2002) – to afford use of the change predicate 'cut'. Interpretation of (5), (6), and (7) depends on an entrenched mapping between spatial extent and temporal duration. However, in (7), changing the plane's out-of-service date implies the omission of three years' worth of planned flights; whereas (5) and (6) have no implication that cutting the timeline would result in omission of any planned activities. The precise implications of cutting a timeline thus seem to be a function of the discourse context – e.g., the rapid development of a drug or the early retirement of a fighter jet – and not of the concrete meaning of 'cut'. Focusing exclusively on the mappings between e.g. spatial extent and temporal duration common to all examples can lead one to ignore important differences that reveal a tremendous degree of sensitivity to content, context, and goals.

3.2 Accelerating timelines

Besides using the mapping between spatial extent and temporal duration, speakers frequently use motion verbs to discuss timelines. Presumably, this reflects the importance of the 'time' input to the timeline blend, and that blend's connection to entrenched construals of time involving motion. Consider (8), taken from a newspaper article about the lobbying activities of Los Angeles mayor Antonio Villaraigosa (The *Christian Science Monitor* 11 March 2010: Wood, D.B.: 'Will Washington fund a Los Angeles subway expansion?'; *emphasis added*) [http://www.csmonitor.com/USA/2010/0311/Will-Washington-fund-a-Los-Angeles-subway-expansion]. The article describes a 2010 trip Villaraigosa took to Washington, DC, to

lobby the federal government for a change in the funding schedule for a planned Los Angeles subway expansion known as 'Subway to the Sea'. The original plan projected construction to last thirty years; Villaraigosa was arguing for a loan to support an alternative, ten-year plan.

(8) Mayor Villaraigosa is now trying to *accelerate the timeline* for such projects from 30 years to 10 by asking the federal government for a bridge loan to get started. He's set to speak before a Senate Environment and Public Works Committee hearing on Thursday. Besides accelerating the start and finish dates of several projects, the loan would save millions and create between 150,000 to 200,000 jobs.

The example is understood so seamlessly, one almost does not notice the difference between the timeline's construal in (8) and that of the examples discussed in Section 3.1. First and foremost, the timeline in (8) is not a static object by which spatial extent has implications for temporal duration. The article describes a proposed change in the duration of the project from thirty years to ten: 'Mayor Villaraigosa is now trying to accelerate the timeline for such projects from 30 years to 10...'. The change in duration is not described in terms of the timeline's spatial extent; it is described as acceleration: i.e., as change in the timeline's 'rate'.

The use of motion language here can be understood as instantiating the conventional metaphor TIME IS A MOVING OBJECT, by which temporal events are construed as objects moving relative to an egocentric reference point (Boroditsky 2000, Moore 2006, Núñez & Sweetser 2004). Future events are construed as being in front of the reference point, past events as behind. The metaphor explains why statements about temporal events routinely involve use of motion verbs ('Dad's birthday is coming'), 'rate' adverbs ('the deadline is rapidly approaching'), and spatial deictics ('May Day is almost here'). Table Two shows some of the important mappings in this metaphor.

Time	Space/Motion
Events	Objects
Now	Ego
Future	Observer-relative Front
Future Events	Objects Moving towards Observer
Immediacy	Spatial Proximity

Table 2: Important mappings in the TIME IS MOTION metaphor.

Using the framework of CIT, Fauconnier and Turner (2008) account for similar linguistic data, along with statements about the subjective experience of time: e.g., 'when you're young, the days fly by, but the years drag on forever; when you're old, the days drag, but the years fly by'. They suggest that a full account of the metaphor TIME IS SPACE requires successive integrations of at least the following inputs: (1) events; (2) objective and subjective experience of motion through space; (3) a blend of the two, with all possible displacements compressed into the case of traversing a path; (4) the blended cyclic day, compressing multiple days into a repeating day, and (5) a natural or technological mechanism that blends with the cyclic day. The last provides yet another input: the socially constructed notion of time, with emergent universal events like seconds, minutes, hours, etc. The result is a dual network dependent on viewpoint: the experiencer can move through time or *vice versa*; it is also possible to view time motion as a detached observer. If the topology of the constructed 'time' notion is privileged, one has 'objective' time experience running at normal speed: e.g., 'an hour must pass before we may leave'. If the experience of events provides the framing, one has 'subjective' time experience running at variable speed: e.g., 'this hour is passing very slowly'.

Such an elaborate system of integration networks accounts for numerous emergent meanings that cannot be explained as the result of direct projections from space to time: e.g., time units have the properties of space measures but are also moving objects ('hours go by'). In the time-space blend, all observers are in the same location; they look in the same direction and see the same objects: namely, time units. Far from encompassing the whole domain of space, this looks like a very particular spatial experience designed to match temporal relations. Although all objects move along the same path, observers can perceive different speeds – e.g., 'the class went by fast for me and slowly for her' – depending on their attitudes. Distant objects can be perceived as close at hand or even more distant: e.g., 'yes, you are only fifty but retirement is just around the corner', 'tomorrow seems light years away'.

The meaning of (8) follows neither from the standard mappings in CMT (see e.g. Lakoff 1993), nor from the account outlined in (Fauconnier & Turner 2008). Accelerating the timeline does not imply that the passage of time changes in any way – either objectively or subjectively. Even in subjective-time expressions in which time is experienced as accelerated so that thirty years can go by in an instant, still, thirty years cannot become ten. The discrepancy involves the mapping between rate in the space/motion domain and its counterpart in the time domain. Although object motion in (8) does indeed map onto passage of time, the rate of object motion maps neither onto objective rate of time, as implied by (Lakoff & Johnson 1980); nor onto perceived rate of time, as in many of the examples in (Fauconnier & Turner 2008). Rather, *acceleration* implies that the project's duration will change. This inference differs substantively from the inferences available in the source input of motion through space. Whereas people talk of a car accelerating from zero to sixty miles per hour, (8) describes a different sort of acceleration: the acceleration of the timeline from thirty years to ten. The use of *accelerate* here involves an entrenched

conventional metaphor in a way that omits the standard mapping between rate of motion and rate of time. Instead, it employs a mapping between the rate of object motion and the project's duration. Moreover, the mapping in (8) is contrary to the conventional mapping between spatial extent and temporal duration so important to the interpretation of (4)-(7), in which a longer distance corresponds to a greater amount of time. In (8), *increasing* the rate of travel implies *decreasing* the project's duration. In the source domain of motion through space, increasing the rate of travel should either increase the distance covered – corresponding to a longer line, implying increased duration – or have no impact. Thus, one sees that the inferences evoked in (8) by the concept of acceleration cannot be generated using a straightforward correspondence between spatial extent, object movement, and temporal duration.

Of course, the invited inference in (8) is that acceleration will increase the rate at which future events travel, allowing them to arrive sooner than they would otherwise. Though slightly different from the mappings outlined in (Fauconnier & Turner 2008), the construal in (8) is better captured by the flexible integration processes of CIT than by the CMT account involving retrieval of fixed mappings. This is because aspects of the TIME IS A MOVING OBJECT construal are relevant for some metaphorical expressions about time, but not for the invited inference in (8). In (8), the critical mappings are not from the space/motion to the temporal domain, but rather from time in one imaginary hybrid space/motion construct – a blend in which dates serve as landmarks on a timeline moving towards the observer – to time in another: a cognitive model of future events in Los Angeles.

The example in (8) can be described in CIT as involving two blended input spaces, each connected to other spaces in the timeline network. In the ***present timeline input***, events – i.e., start and finish date – move towards the observer at a fixed pace conveyed by the line. In the ***desired timeline input***, event objects – start and finish date again – move towards the observer at a faster pace than at present. Events, related by analogy in the inputs, map onto a single event object in the blend via analogy-identity compression. The disanalogy between rate of motion in each input space is compressed to rate change in the blend, affording the construal of the timeline as *accelerating*. The metaphorical use of acceleration is motivated not by straightforward analogy with the domain of motion but by the way it highlights differences between the present and desired timelines. More generally, (8) demonstrates how cognitive models of hypothetical possibilities figure prominently in the semantics of utterances about timelines and how CIT may be used for describing the way these interact with metaphorical construals of the target.

4. POETIC USES OF THE TIMELINE BLEND

Fauconnier and Turner (2008) show how novel metaphors preserve the complex space-time network by examining a literary example (McDonald 1991: 82-83):

(9) Perhaps time is flowing faster up there in the attic. Perhaps the accumulated mass of the past gathered there is pulling time out of the future faster, like a weight on a line. Or perhaps, more mundanely, it is only that I am getting older every year and that it is the accumulated weight of time behind me that is unreeling the years with ever-increasing speed. What a horrible thing it must be to grow older and find that ever-decreasing number of years hurrying you faster, faster toward your grave, as if time were impatient to be rid of you.

Here one finds a derivative of the standard time-space network: 'time has a variable speed and now a new blend is constructed according to which that motion is induced by standard physics. Weight is pulling the timeline along' (Fauconnier & Turner 2008). Following our analysis, one could say that this is another case of an accelerated timeline. However, there are fundamental differences. In (9), subjective time is accelerated: the number of years (to live) remains the same, but they pass faster. In (8) – as we noted – time is not accelerated in any way, but the duration of the LA subway project is shortened. In (9), one does not have the additional inputs of a present and a desired timeline but instead, as Fauconnier and Turner describe, a subjective time-space blend that happens to recruit the image-schematic structure of a line – and that is how 'standard physics' opportunistically intrudes. This is exploited to serve the narrator's communicative goals, aimed at constructing affective meaning related to aging and the sentimental connotations of attics – which, in the blend, become the weight that unreels the timeline faster and faster.

However, we wish to stress that the appearance of the linear schema in examples like this one is far from either trivial or fanciful: representations of objective or subjective time do not need to include a line. The line is an added input to the network: one that happens to be an especially useful structure for compression, at the same time matching beautifully the type of motion in the blend and the regular continuity of time. The recruitment of the linear schema confirms the existence of a widely shared *generic integration network* – as defined by Pagán Cánovas (2011) – for the compression of time relations into one-dimensional space, of which Priestley's timeline is only one possible instantiation. In (9), the unreeling of a pulley-like device provides quite a different context-driven anchor, under pressure to depict speed and intentionality of time as a personified abstract cause. These last aspects are normally absent from chronological timelines; but nothing in the concept of time prevents the pulley from being used as a timeline in e.g. a history museum as an interactive exhibit.

One does not always need to interact physically with the material anchors of blends. If the material structure is widely shared and simple to operate – as many such structures are – they can be virtually manipulated by imagining them, representing them, remembering them, talking about them (Vygotsky 1978). One does not need to be shown a clock to be told the time – or even to make one understand complex metaphorical examples such as (10) (Asch 1952: xiv-xv; quoted in Rozin 2001):

(10) In their anxiety to be scientific, students of psychology have often imitated the latest forms of sciences with a long history, while ignoring the steps these sciences took when they were young. They have, for example, striven to emulate the quantitative exactness of natural sciences without asking whether their own subject matter is always ripe for such treatment, failing to realize that one does not advance time by moving the hands of the clock.

Representing a – sometimes peculiar – material anchor for the timeline blend is common to many metaphorical expressions. Instantiations of the timeline can look quite strange indeed in poetic texts, as poets introduce structures that nevertheless connect with relevant knowledge and become effective prompts for affective meaning. The first lines of a poem by the Mexican Noble Prize winner Octavio Paz provide a spectacular example:

(11) ***Más allá del amor***, by Octavio Paz

Todo nos amenaza:
el tiempo, que en vivientes fragmentos divide
al que fui
del que seré,
como el machete a la culebra;

Everything threatens us:
time, which into living fragments divides
the one I was
from the one I will be,
like the machete the snake;

Time here is not a line but a personified agent (Line 2) that separates one's past from one's future self. *Time the Divider* – already a blend – maps onto a mental space in which the agent severs a living being 'into living fragments'. However, none of the integrations we have just sketched justifies the choice of the snake. One can cut many plants and animals 'into living fragments' with a machete. Why a snake? What makes the snake so effective a choice?

Several cultural reasons may make the snake appropriate. It has symbolic value for Paz and for Mexico, although perhaps that value is not easy to apply here. As the poem unfolds, one sees that Paz is opposing an animalistic, sensual, 'full' life to consciousness: time experience, self awareness, language, etc. As a wild animal, the snake can be linked to that primordial life represented, farther along in the poem, by the jungle and the ocean's foam. The snake may also prompt for activation of a widely shared cultural frame: Adam and Eve's story in Genesis. These and other associations can be both relevant and productive; but they are not enough to justify the choice of the snake among all the other possibilities.

When one finishes reading the fifth line, how does one see the snake? Is it rolled? Is it 'snaking'? How many times does the machete cut it, and into how many pieces? The text specifies no answer to these questions. However, most people will probably have envisioned the snake as a more-or-less straight line

cut in two. One is prompted to see two pieces by the 'living fragments' into which the self is divided in the preceding lines: past and future. Why a straight line? Live snakes are almost never found in such a position. We suggest that the structure has been imported from another input: the timeline.

Mapping back to a timeline is an especially useful property for this snake, driven by the context – *Time the Divider* severing the past from future self – and the poet's rhetorical goal of suggesting that one's time awareness makes one suffer and die, that it prevents one from enjoying life fully. In the resulting blend, the snake's elongated shape is used opportunistically to activate the line in a context of reflection on time: the snake becomes an imagined anchor instantiating the timeline. The snake-as-timeline maps onto the divided self, which was not necessarily linear in the first part of the simile but becomes so in the final blend. This is crucial for supporting the construction of affective meanings that one would ordinarily not encounter in other timeline examples. Some of the most significant mappings and emergent structures include:

(a) In contrast to one's conventional understanding of temporal continuity, Paz' timeline, instantiated as a snake, can be broken into pieces that cannot be put together again, leaving a gap between them.

(b) *'The one I was'* and *'the one I will be'* have no spatial definition beyond being living fragments of a previous whole. In Line 5, they map onto the two (linear) sections of the snake's body into which the machete has cut the snake. Most readers will probably see the part of the snake containing the head as analogous to the future self, the part containing the 'tail' as analogous to the past.

(c) The present self maps onto the bleeding wound, which corresponds to the gap in the timeline. This differs from standard construals of time, in which the present is not a missing part but a moving point in the timeline.

(d) The mappings between *divided self*, *severed snake*, and *'broken' timeline* bring into question basic aspects of the standard notion of time.[2] Here, the present does not link the past and future: it separates them. One's two selves can no longer meet: the wound is incurable.

(e) One's 'living fragments' cannot last long: life is short and cruel.

(f) All this is extremely painful to the reader. She is a victim, just like her analogue, the snake. This challenges practically all the archetypical views of snakes as dangerous, powerful, repulsive, etc. In this context, these archetypical features remain latent: if one could only liberate oneself from time awareness, one would become that kind of creature.

(g) One's consciousness of time creates the linear self and causes time to divide that self into irretrievably separated selves. One's awareness puts one in the position of the snake falling under

[2] For poetic metaphors and questioning, see (Lakoff & Turner 1989: 67-72).

> the machete. It is one's consciousness that causes one's misery and, ultimately, destroys one's true identity and the life one could live.

There is nothing the reader can do. Like the snake, she is helpless as she receives the blow – from an object (note that time is the machete, not the wielder of the machete) to which one cannot successfully respond: time and consciousness are unavoidable and merciless. Trying to appease *Time the Divider* would be like the snake negotiating with the machete.

5. LOOKING FORWARD: THE IMAGE-SCHEMATIC BASIS OF TIMELINE BLENDS, AND CONSIDERATIONS FOR FUTURE RESEARCH

The selection of a linear structure to anchor time-space mappings is neither trivial nor whimsical, as shown by both conventional and novel examples. In the input of motion through space, an object can take any trajectory. Faster objects surpass slower ones, and several objects can reach a destination simultaneously. In the time-space blend, by contrast, time units share the same (linear) trajectory, come from the same direction, cannot overtake one another, and cannot arrive at the same time. If one's goal is to present Franklin's life as a series of salient events in sequence, then these events cannot be allowed to co-occur, and the length-duration relationship must be the only one that holds. The properties of a straight line comply with these constraints and provide an adequate topology for the blend, though they clash with many other aspects of one's experience of traversing paths.

As for integrating one-dimensional line with two-dimensional path, spatial cognition often makes the image-schematic structure of the line a tool for construing narrow shapes as one-dimensional objects, discarding those properties that are irrelevant for present *ad hoc* purposes. Indeed, people often integrate paths, ropes, blades, and snakes with linear schemas, allowing them to build cognitive models with a combination of properties from one- and two-dimensional objects: e.g., a path that allows only one object to move along it at a time. These are not characteristics of lines that are transferred onto time, but needs of time conceptualization that make lines especially appropriate for the mapping. Recruitment of the line as input to the timeline integration network requires extant knowledge of time along with certain representational goals. It is not that one understands time in terms of space. Rather, it would seem that the relevant spatial structure has been adjusted to fit one's knowledge of sequences: that is, the spatial topology has been modified to fit the temporal structure. The most creative and complex examples one can find confirm this fine tuning of spatial to suit temporal structure. In Paz's poem (11), one sees that the machete-snake input has been adjusted to match its time-self counterpart: out of the infinite possibilities available to instantiate the scene that the poet describes, one imagines a straight snake cut into two pieces.

Grady, Oakley, and Coulson (1999) argue that CMT and CIT are complementary: the former well suited to identifying general cross-domain mappings, the latter to analyzing specific examples. The

implication is that metaphor research should proceed in parallel tracks, with metaphor theorists focusing on conventional language and blending theorists on creative examples. The intervening years have seen increasing convergence of the two approaches, as metaphor research in CIT draws increasingly on the methods and findings of CMT (e.g., Oakley & Coulson 2008) and cognitive linguistics in the CMT tradition increasingly advocates the need for additional analytic tools. Lakoff and Johnson (1999) allow that analysis of metaphor in everyday language frequently requires the mechanisms of CIT for composing two or more conceptual metaphors. Moore (2006) suggests that the definition of conceptual metaphors as cross-domain mappings is overly general, recommending instead their characterization as mappings between elements in simple frames, akin to those that structure mental spaces.

CIT research increasingly involves the identification of generalizations (Fauconnier 2009, Pagán Cánovas 2011, Pagán Cánovas *in press*). The examples discussed in Section Three collectively suggest that blending disanalogous timelines into a single timeline, with emergent properties related to change, is to construct a generic integration network. Fauconnier (2009) defines a *generalized integration network* as an abstract blending pattern underlying multiple examples that can be applied to novel domains: e.g., the 'Zoloft network' is a blended space incorporating incompatible information from the actual circumstances in a situation (in which a teenager has murdered his grandparents) with structure from a salient counterfactual space, so as to emphasize one aspect of that situation. Fauconnier suggests that the same pattern applies to the following excerpt from the San Francisco Chronicle 'Bar patrons fume over smoking law: Drinks left inside as they puff away', by Michael Taylor, *San Francisco Chronicle* [01/02/98: http://no-smoking.org/dec97/01-02-98-1.html]:

(12) 'No Smoking' signs were tacked up in bars all over California yesterday, and hard-core smokers nursing a scotch or a beer were so angry that if they had been allowed to light up, the smoke would have been coming out of their ears.

In (12), the relevant structure from the actual circumstances is that the smoking ban made smokers angry; the salient counterfactual involves a cognitive model incompatible with the structure in that space: the smokers are allowed to smoke. In the blend, the smokers use their temporary release from the smoking ban to express their anger over it by emitting smoke from their ears.

The Zoloft network gets its name from a court case in which a teenager, who had recently begun taking the medication Zoloft, murdered his grandparents. One of the arguments for the defense was that, were his grandparents alive, they would support a lenient sentence for their grandson. The actual circumstances of their murder are blended with the salient counterfactual in which they are still alive to underscore the accused person's lack of culpability. Such cases suggest that intricate generic integration networks can become conceptual templates, easily recruited and modified to suit *ad hoc* purposes. Just because the blending account is more detailed does not imply it has less generalizing power than CMT's

binary mappings. Through automatization, even highly complex conceptual recipes can become entrenched – systematically rendering emergent structures useful in different communicative contexts.

We believe that timelines are paradigmatic of metaphorical understanding. As graphical objects, timelines demonstrate the way that metaphor – indeed, conceptual structure in general – is not a 'mere' product of language but plays an important role in structuring cognitive activity. Furthermore, timelines demonstrate the import of material anchors: input spaces constituted by material structure, tools designed specifically to reduce individual cognitive load and promote efficient, error-free computations. Timelines employ compressions, in which elements from multiple input spaces map onto closely related elements in the blended space, giving it novel computational properties. The utility of the timeline is not simply that it involves a metaphorical mapping from a concrete domain to an abstract one; the linear schema has been selected, via a process of cultural evolution, to best meet the needs of time conceptualization.

Finally, we have stressed the extent to which particular timeline instantiations have different underlying mappings as a function of their differential content and contexts. Examination of attested examples reveals a great degree of variation in the mappings and inferences promoted. As Fauconnier and Turner (2008) show, classical conceptual metaphors like TIME IS SPACE are only the tip of the iceberg. Our analysis suggests that even the dual system of integration networks – connecting events, objectively and subjectively experienced motion along a path, and the socially constructed notion of time (Fauconnier & Turner 2008) – is not enough to provide a full account of timeline blends. Representational goals often lead speakers to combine two or more conceptual metaphors via metaphorical and metonymic mappings, and to embed their metaphors in hypothetical – or even explicitly counterfactual – contexts.

In conclusion, metaphor use is often strategic: language users seek cognitive models to promote their desired construals of the topic at hand, much as poets do. Such discourse does not occur in a vacuum; speakers and listeners together navigate a rich cultural landscape of extant construals with varying degrees of entrenchment. These construals include the binary mappings of CMT but also detailed blending patterns described via generic integration networks. Sharing these detailed procedures for building complex structure makes the meaning construction process more fluid and adaptable to speakers' communicative needs. Better understanding metaphor – like better understanding timelines – requires the development and refinement of more detailed generalizations of the type proposed by CIT.

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A Re-examination of UNDERSTANDING IS SEEING

Cognitive metaphor theorists have identified a number of mappings that, it has been claimed, are both central to thinking and productive of linguistic metaphors. One of these is UNDERSTANDING IS SEEING. In this article, we re-examine UNDERSTANDING IS SEEING using two sources of naturally occurring data. Our first source is the Oxford English Corpus: a two-billion-word corpus of authentic contemporary English texts, from which we extracted a 1,000-citation concordance of the lemma SEE. We analyzed this into major sense groups and identified the most frequent lexico-grammatical patterns. Our second source of data is transcribed spoken English from focus-group discussions. We analyzed this dataset, using detailed discourse analysis, to identify the meanings of SEE and its most frequent phraseologies. Both analyses lead us to conclude that SEE is, indeed, used to talk about understanding, as claimed by Conceptual Metaphor theorists, but that the metaphor usually describes difficulties with understanding another speaker's point of view or, more generally, the process of reaching an understanding: that is, it is used to talk about understanding or not understanding as processes, not states. Our findings are consistent with the construal of language and thought as a dynamic system.

Keywords metaphor, corpus analysis, discourse analysis, dynamic systems.

1. INTRODUCTION: THE RELATIONSHIP BETWEEN LANGUAGE AND THOUGHT IN CONCEPTUAL METAPHOR THEORY

Proponents of Conceptual Metaphor Theory have argued that metaphors operate at the conceptual level, mapping a well understood, usually concrete, domain onto a less well understood, usually abstract domain (Lakoff & Johnson 1980, Lakoff 1993). Offered as evidence in support of this claim are the numerous words that occur in more than one semantic domain. Conceptual Metaphor theorists note that many of these cluster into lexically related sets; for instance, many words, including *see* and *picture,* occur in both the concrete domain of physically seeing and the abstract domain of understanding. Lakoff and Johnson cite the expressions *I see what you are saying* and *Now I've got the whole picture* (1980: 48) among their linguistic evidence for the metaphorical mapping UNDERSTANDING IS SEEING. Since Lakoff and Johnson's groundbreaking work, similar intuitively satisfying examples have been given by researchers to argue for the existence of a large number of conceptual mappings including UNDERSTANDING IS SEEING, along with variations and developments on them.

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Conceptual Metaphor theorists argue that multiple entities are mapped metaphorically from a source domain to its target domain, along with their attributes and the relationships between them. As Lakoff writes, 'metaphors are mappings; that is, sets of conceptual correspondences' (1993: 207). The mapping of relationships is at least as important cognitively as the mapping of entities, because the network of relationships gives the target domain its structure. Lakoff and Johnson (1980: 79-81) argue that metaphors enable one to structure experience into a coherent whole.

In Conceptual Metaphor Theory, metaphorically used words are the linguistic realization of these underlying patterns of thought. At the linguistic level, there are metaphors that are systematic and ubiquitous. Because these linguistic metaphors are believed to realize structural relationships, Conceptual Metaphor Theory predicts that they should demonstrate the same semantic relations in the target as in the source domain. Although Conceptual Metaphor Theory regards language as secondary to thought, given language's importance as evidence for thought and the theory's strong predictions about language patterning, detailed analysis of language patterning is potentially very illuminating.

In this paper, we return to the mapping UNDERSTANDING IS SEEING and re-examine it using current techniques from two traditions within applied linguistics: corpus analysis and discourse analysis. These techniques have developed considerably since the early formulation of Conceptual Metaphor Theory in 1980; their potential contribution to cognitive linguistics is now widely recognized (e.g., Stefanowitsch & Gries 2006, Gibbs 2010: 6). We describe uses of *see* that have elements of metaphorical and metonymic meaning found in a large general corpus of current English; we describe their patterns of form and meaning. We describe the figurative use of *see* in a smaller corpus of focus-group data, analyzed using techniques that focus on the development of speaker meaning through unfolding discourse. The kind of knowing or understanding described in these figurative expressions adds to the description arising from the discussions in the conceptual metaphor literature, but differs in being more modal, partial, and interpretative. Before turning to discussions of and evidence for UNDERSTANDING IS SEEING, we discuss in more detail aspects of metaphor in thought and language.

2. CHARACTERISTICS OF NATURALLY OCCURRING NON-LITERAL LANGUAGE

2.1 Fixedness and stability

Much metaphorical language seems to occur in semi-fixed expressions, with relatively stable syntactical and lexical patterns and specific affective and pragmatic meanings (Cameron & Deignan 2006). The relationship between fixedness and meaning is not a new observation: researchers working within corpus-based and applied linguistic traditions have noted that words tend to fall into semi-fixed syntactic patterns (Sinclair 2004, Hunston & Francis 2001). These are strongly associated with meaning, with different meanings of the same word tending to demonstrate different syntactic

patterns. So Hunston and Francis (1998) demonstrate that the word *consider* has a large number of related but distinct senses, each associated with a different syntactic pattern. When followed by the -ing form of the verb – in citations such as 'they are considering providing free electricity' – the meaning is 'think about doing something in the future', whereas when *consider* is ditransitive – as in 'he does not consider himself a celeb' or 'it is valid to consider memory the oldest human skill' – it means 'have an opinion about something' (examples from Hunston & Francis 1998: 47).

One of the authors, Deignan, has argued that this tendency can help to distinguish literal from metaphorical uses of words (2005). At the major level of part of speech, she has found a tendency for word use in animal metaphors to be verbal rather than nominal, probably because they tend to refer to behaviour. For instance, the words *wolf, squirrel, horse, hound, ape,* and *hare* are all used to refer to people, but only as verbs – poetic or innovative use excepted. At a more detailed level, syntactic patterns such as whether verbs are typically used in active or passive voice and whether nouns are count or non-count or are typically used in the singular or plural are associated with specific literal or metaphorical meanings of words.

A similar degree of fixedness is associated with lexical patterning. In the same book (2005), Deignan shows that when the word *pay* appears in the vicinity of *price*, both words are likely to have a metaphorical meaning: consider expressions such as *pay a high price for, a small price to pay,* and *to pay the price*. Many metaphorical meanings are closely associated with fixed collocations: when *rock* is used metaphorically to mean 'secure', it tends to occur in the collocations *rock steady* and *rock solid*. *Direction* is used metaphorically to refer to people's future choices in life; although it can combine relatively freely, this meaning is found in such expressions as *a step in the right direction*. Deignan (2010) suggests that the tendency towards lexical and syntactic fixedness, while a feature of all language, is stronger for metaphorically used words than for their literal counterparts. Conceptual Metaphor Theory is not concerned with linguistic patterning but with the patterns of thought that, it is claimed, underlie language use. From its perspective, the examples above might be considered noise, unworthy of close study. We disagree, believing that such details raise such important questions as the following (Cameron & Deignan 2006: 673):

(1) Why are linguistic metaphors apparently subject to grammatical and lexical restrictions?
(2) If linguistic metaphors are the expression of a broad conceptual mapping, why are they so unevenly and inconsistently distributed?

2.2 Non-literal language and emergence: metaphoremes

Possible answers to these questions can be found by casting language and thought as forming a complex dynamic system within which patches of stability emerge over time. In complex systems, stabilities – or attractor states – are not predictable, though they can be explained *post hoc* (Larsen-Freeman & Cameron 2008). This seems characteristic of such semi-fixed metaphorical expressions as

pay a high price for, *a step in the right direction*, and *emotional baggage* (Cameron & Deignan 2006) as found in natural language data. Their fixedness and frequency in natural language qualify them to be considered as stabilities. They can be explained *post hoc* using a conceptual-mapping model of metaphor, such that the model predicts their occurrence, but not their specific features. We have termed stabilities like these 'metaphoremes', where a metaphoreme is 'a bundle of relatively stable patterns of language use' (Deignan & Cameron 2006: 686).

This paper examines linguistic metaphors associated with seeing, extracted from naturally occurring corpus and discourse- data. We find a number of metaphoremes. Our theoretical background is a complex dynamic-systems framework in which conceptual metaphors are one force contributing to the emergence of linguistic metaphors, alongside other forces that may be affective, pragmatic, linguistic, or contextual. We hope to demonstrate that this approach can give a more subtle account of metaphor at the level of language – and also, possibly, at the level of thought. Before turning to the data, we discuss previous research into the UNDERSTANDING IS SEEING mapping.

3. STUDIES OF UNDERSTANDING IS SEEING

3.1 Linguistic evidence and patterns of meaning in contemporary English

Scholars have described what seems to be roughly the same metaphor, in which vision is mapped onto cognition, variously terming the mapping UNDERSTANDING IS SEEING, KNOWING IS SEEING, or THINKING IS SEEING – the implications of the different wordings are of possible interest, but we will not explore that here; the examples cited strongly suggest that the same mapping and correspondences are intended by the different wordings, and we will therefore regard them as equivalent. Here, we use Lakoff and Johnson's UNDERSTANDING IS SEEING, which seems to be the most frequently used. Lakoff and Johnson (1980: 48) base their claim for the mapping on linguistic expressions such as:

I *see* what you're saying.
It *looks* different from my *point of view*.
What is your *outlook on* that?
Now I've got the *whole picture*.

Lakoff and Johnson do not explore in detail the patterns of meaning in these examples. Note that their examples concern both the act of seeing and the product of the act (the *picture*) – and, by implication, the dynamic of not-seeing and then seeing: of coming into vision or becoming visible. We take up these points below in the discussion of our own data.

Sweetser cites as evidence for the mapping KNOWING IS SEEING (1990: 37) such expressions as:

I *see*.
… a *clear* presentation.
… an *opaque* statement.
… a *transparent* ploy.

Danesi has explored (1990) the nature of abstract thought through an exploration of visual metaphors, which he claims realize THINKING IS SEEING. He cites (1990: 222):

I cannot *see* what you're getting at.
There is more to this than *meets the eye*.
That is my *point of view*.
I do not agree with your *viewpoint*.
That's the way I *visualize* it.
It all depends on how you *look at* it.
Seeing is believing.
I cannot quite *picture* that.

He classifies (1990: 224) THINKING IS SEEING metaphors into three groups, the first focusing on the physical process of seeing:

I do not *see* the point of your argument.
We never *see eye to eye* on matters.
I *view* things differently.

Both Lakoff and Johnson's examples and, to some extent, Sweetser's are concerned both with 'not seeing' (metaphorically: not thinking or understanding) and seeing – a point we return to below.

The second group concerns differences in perception, framed metaphorically as differences in the intensity of a light source that illuminates the object of seeing:

That was a *brilliant* idea.
I take a *dim* view of that whole affair.
What you are saying is *not very clear*.

The third group are vision metaphors that refer to 'modalities involved in the visual perspective' (1990: 224):

I have a different *outlook* than you do.
With *hindsight*, I would have done it in the same way.
You have very little *foresight* on most issues.
Her speech *threw light on* the matter.

In a recent paper (2001), Danesi uses Cognitive Metaphor Theory to construct principles of abstract concept formation. He writes that (2001: 133) 'a specific metaphor is viewed as a "discourse trace" to the structure of the abstract concept in question'. He again describes the mapping THINKING IS SEEING and explores the role that the concept of light plays in literal and metaphorical seeing. 'The external physical properties of light that permit vision (visibility, brightness etc) … are then projected onto the target domain of knowing. The end result is a conceptualization of knowing as "internal vision"'(2001: 138). He cites the following examples (2001: 239):

His words *threw some light* on the question.
That newspaper *brought* the scandal *to light*.

Several of the above examples suggest extension of the mapping beyond vision and thought to related areas: a point taken up by some writers. Lakoff and Johnson do not extend the SEEING metaphor in this way but propose further mappings: IDEAS ARE LIGHT-SOURCES and DISCOURSE IS A LIGHT-MEDIUM (1980: 48), citing the expressions:

The argument is *clear*.
It's a *transparent* argument.
The discussion was *opaque*.

3.2 Etymology and cross-linguistic studies

As well as being broadly agreed upon by cognitive scholars, the mapping of SEEING onto KNOWING /UNDERSTANDING /THINKING has been noted by lexicographers. The 'understand' meaning of *see* is listed in the Shorter Oxford English Dictionary (SOED), defined as 'to perceive mentally, to apprehend by thought (a truth etc); to recognize the force of (a demonstration) often with ref. to metaphorical light or eyes' (1971: 1928). The SOED traces the earliest citations of this usage to Middle English. The Oxford English Dictionary Online lists the following, attested in Old English: 'to know by observation (ocular and other), to witness; to meet with in the course of one's experience; to have personal knowledge of, to be a contemporary of and present at the scene of (an event); to be living at (a certain period of time). Also, to experience (a specific age in life): usu. in negative context.' Meanwhile, Sweetser investigates the etymology of perception verbs including *see*, arguing

that (1990: 23): 'the historical and synchronic data point to one and the same cognitively based analysis of the relevant semantic domain'.

Sweetser finds evidence for the mapping across a number of Indo-European languages: 'vision verbs commonly develop abstract senses of mental activity' (1990: 33). Allan notes evidence of the mapping in some Austronesian and Afroasiatic languages (2008: 58-61). Where mappings are shared across a wide number of languages and cultures, it seems likely they originate in experience that is universal to human beings, not culturally specific. Sweetser argues that the widespread nature of the mapping shows it has an embodied and experiential basis. Kövecses (2002) is of the same opinion, pointing out that KNOWING IS SEEING has its roots in physical experience: to know or understand something, one often must see it first. 'The source domain is a precondition for the event in the target to occur…. Seeing makes knowing possible in many cases' (Kövecses 2002: 158). Sweetser develops the experiential argument, claiming that sight feels like the most reliable and objective of the five senses: 'two people who stand in the same place are generally understood to see the same thing' (1990: 39). She argues that this attribute of physical seeing is mapped onto the figurative sense, so that metaphorically seeing is objective: 'the objective, intellectual side of our mental life seems to be regularly linked with the sense of vision' (1990: 37). She claims that figurative expressions referring to opinions or points of view are not counterevidence: different points of view imply the same entity viewed from different locations. By implication, if the same entity is viewed from the same location, it will be seen – and understood metaphorically – in the same way.

The research reported here finds general agreement on two central points: the abstract domains of knowing and understanding are often understood through the concrete domain of physical vision, and the metaphorical correspondences spread into related domains such as light and darkness. Where Sweetser or, to a lesser extent, Kövecses discuss the nature of thinking or understanding, metaphorical SEEING is described explicitly as an objective process, owing to its grounding in the (supposedly) objective nature of literal seeing. Some of the examples they cite suggest, however, that the mapping is not always so straightforward, even though, with the exception of Danesi (1990) who explores these subtleties in his discussion of the modalities of seeing and thinking, this is not commented on. A further gap in the abovementioned discussions lies in the nature of the evidence presented. For those of us who are applied linguists, there are limitations to the use of de-contextualised examples, especially when they do not come from natural language in use. We begin the next section with a brief discussion of this issue.

4. METHODS

4.1 Using complementary, naturally-occurring data sources

The linguistic data cited in support of the claims in the previous section seem, in most cases, to be intuitively sourced. Where citations are taken from naturally occurring data, they are almost invariably presented as isolated expressions or sentences, without their wider co-text. For applied linguists

working thirty years after the original work on Conceptual Metaphor Theory, this methodological decision raises two problems. First, over the last three decades, it has been repeatedly observed (e.g., Sinclair 2004) that language users are not good at producing examples of language that have the usage characteristics of naturally occurring citations. Deignan has argued (2005, 2008) that studies of metaphorical meaning should always be based on naturally occurring language because subtleties of meaning and form are not retrievable through unaided intuition. Second, assuming the meaning of language samples without considering the wider discourse presents a problem. Cameron has shown (2003, *et al*. 2009) has shown that aspects of meaning – perhaps, especially, figurative meaning – may be built up over a stretch of discourse. Much may be missed when a single utterance or phrase is removed from its surroundings.

For our study, we examined a large number of citations of *see* and its inflections taken from in naturally occurring data of two types: corpus and discourse data. They differ importantly. Corpora provide large numbers of citations from many different texts. Although a certain amount of context is available, they are normally studied in a window of 80 characters; the analyst usually has no knowledge of the discourse context beyond what she can glean from the name of the text from which the citations are taken. In contrast, discourse data arise from continuous spoken discourse, which has the advantage of allowing the analyst to see how meaning is built up and negotiated between participants during the discourse – something that is not possible in the 'snapshot' approach of corpus work. Often – as in this case – the analyst has a privileged insight into the context of the discourse, having either been a participant or (as here) having a specialized knowledge of the topic or discourse community. Corpus data lack these possibilities but have the advantage of offering a very large number of instances of the language feature under investigation. We have argued elsewhere (Cameron & Deignan 2003) that corpus and discourse data can complement each other.

4.2 The corpus study

Corpus analysis has been used previously to explore Conceptual Metaphor Theory and has the potential to contribute to further theoretical debate. One example is investigations into the linguistic implications of the domains-mapping hypothesis. Deignan (1999) investigates temperature metaphors for emotion using corpus data, looking for correspondences between literal antonyms such as *warm/cool* and *hot/cold* and literal near-synonyms such as *icy/ freezing/ frosty* in the target domain of emotion: Conceptual Metaphor Theory predicts that parallel relationships should be found in the metaphorical uses of these words. Deignan does, indeed, find a strong tendency to talk about emotions using the lexis of temperature, resulting in frequent linguistic metaphors. However, these metaphors do not form a semantically coherent network. Relationships of antonymy and hyponymy from the source domain are often *not* replicated in the target domain. One finds detailed patches of correspondence, but no consistent mapping of relationships.

Research into metonymy (Goossens 1995, Barcelona 2001) and embodiment (Gibbs, Lima & Francuzo 2004; Gibbs 2006) in the post-1980 cognitive tradition can explain these findings. The argument is frequently made that much metaphor is grounded in metonymy, which is often the result of embodied experience. In this view, many temperature metaphors arise from metonymies in which the bodily experience associated with an emotion is mapped onto that emotion. Thus, heat is mapped onto anger to produce figurative expressions such as *a heated argument*. If the domain of emotion is structured by the domain of temperature, one might expect an antonymous use of *cold*, meaning 'not angry'. In contrast, a metonymy-based account does not predict large-scale systematic mapping: one does not feel cold when one is not angry, so it is not surprising that one does not find metaphorical use of *cold* with this meaning in naturally occurring language data. The patchiness of the linguistic metaphors found in corpus data is consistent with small-scale mappings of a number of temperature metonymies, rather than one large, structured metaphorical mapping. In our present research, corpus analysis supports a refinement of Conceptual Metaphor Theory as originally articulated, via a level of linguistic detail that would not be possible using small data sets or invented data. What at first glance seems like linguistic noise has theoretical implications.

For the present study, we used the Oxford English Corpus[1]: a two-billion-word corpus of written and spoken contemporary English from a variety of sources. We randomly sampled 1,000 citations of *see/saw/seeing/seen/sees*. We read through all 1,000 citations, using Cameron's (2003, *et al*. 2009) version of the 'pragglejaz' procedure (Pragglejaz Group 2007) to identify 'vehicle' terms rather than words (as in the original procedure). Uses were classed as metaphorical if they satisfied both the criteria of contrast between contextual and basic meaning, where the basic meaning of *see* was taken to be visual perception, and transfer of meaning from the basic to the contextual sense. We identified 523 citations as having some degree of non-literal meaning. We made no attempt to separate metaphor from metonymy, and we included uses that we term 'hybrids' where literal and non-literal meanings seemed to be invoked together (example below). We did not analyze the remaining 477 (literal) citations in detail.

We then re-examined the 523 citations, classifying them into broad semantic groups. Where we found regularities of form, we kept the citations in a separate group. Regularities of form always occurred within the same broad meaning of *see*. Sometimes these formed a subset of a group of citations with a common meaning: that is, citations with the same general meaning sometimes consisted of a number of smaller groups having different formal patterns. This rarely happened the other way round: similarity of form almost never crossed over from one semantic group to another. The exception was where the grammatical form is very common, such as where *see* is followed by a direct object. More complex forms such as *see [something] as [something]* were unique to a single meaning. We did not use a dictionary at the beginning of the process because of our belief in the

[1] http://www.oxforddictionaries.com/page/oec

importance of corpus-driven analysis (Tognini-Bonelli 2001): that is, the analyst should not impose pre-determined classifications on the data.

We sorted the concordance of figurative uses alphabetically by the word immediately to the left of *see/sees/seen/seeing/saw* for ease of reading. We first separated out the non-literal sense that was easiest to identify, in which *see* is used for cross-reference elsewhere in the text or another text. We then separated out citations in which *see* means 'perceive in a particular way' or 'find out'. The process was iterative and involved re-reading some citations a number of times. At a later stage in the process, when we thought we had identified the most frequent senses and had a small group of around fifty citations that were difficult to classify, we consulted two corpus-based dictionaries: Macmillan English Dictionary for Advanced Learners, and Collins Cobuild English Dictionary for Advanced Learners. We did so to help with the classification and definitions and to resolve borderline cases. For one meaning in particular, the Collins Cobuild definition helped us verbalize a meaning that we understood from citations but found difficult to articulate: 'know by observing'. Collins Cobuild also helped with splitting groups of meanings into sub-groups.

As mentioned above, we found a number of hybrids: citations in which an expression seems to lie on the boundary between literal and metaphorical or involve both senses. These citations make it difficult – perhaps pointless – to draw a clear line between metaphorical and non-metaphorical uses. We feel it methodologically unsound to attempt to do so given the subjectivity involved. Consider:

> He is the DA and he's *seen* all of the evidence.

In this citation, *seen* is (probably) literally true but also has the entailment 'consider', making it a hybrid of literal and non-literal meanings.

We now describe the second part of our study, before discussing our findings from both parts.

4.3 Discourse data from focus group discussions

Our second dataset consists of discourse data from twelve focus-group discussions held in the spring of 2006 on the topic of living with the background risk of terrorism.[2] We recruited eight participants per group in two UK cities: London and Leeds. Groups differed in socioeconomic status, generalized from occupation and education. Separate groups were organized for Muslims and non-Muslims and for men and women. Each discussion lasted about ninety minutes and was structured by a moderator, who asked prepared questions but otherwise left participants to interact with minimum interruption. The discussions were audio-recorded and transcribed, producing a total of 213,271 words.

Full analysis of the metaphors was carried out using the procedure detailed by Cameron *et al*. (2009); some of the findings are reported in (Cameron and Maslen 2010). For the present study, we

[2] The research was funded by the UK Economic and Social Research Council (ESRC RES 228250053) under its New Security Challenges programme.

carried out a further round of analysis[3] using the software Wordsmith Tools v.5 (Scott 2007) to extract all instances of the lemma *see*: i.e., *see/seeing/sees/seen/saw*. We placed these into an Excel table and sorted them into metaphorical and non-metaphorical uses, following our version of the pragglejaz procedure. As with the corpus data, we found – alongside clearly metaphorical or literal uses – a large group of ambiguous uses we classed as 'hybrid' because a metaphorical sense was possible to infer alongside the literal sense. In some cases, it was clear from the discourse context that both senses were active; in other cases, we were unable to know. Examples from the data include:

They *see* their families suffering.
I couldn't get into London to *see* her.

Table 1 gives the numbers of metaphorical, hybrid, and literal senses found for each of the forms of the lemma.

	non-finite *see*	*(*I/you/they*)see*	*sees*	*seeing*	*seen*	*saw*	**Total**
Metaphorical	45	90	0	4	2	2	143
Hybrid	20	41	0	2	45	4	112
Literal	23	87	4	15	56	32	217
Total	88	218	4	21	103	38	472

Table 1: Uses of the lemma SEE in the focus-group data.

The distribution of unambiguously metaphorical uses is different from the other two categories, with a much higher proportion of non-finite uses: 32% of total instances, as against 18% for hybrid and 11% for literal uses. The non-finite uses result from a tendency for metaphorical uses to be modal or negative, as shown below.

We then examined the metaphorical, literal, and hybrid uses of *see* for form and meaning to identify patterns of form/meaning relationships.

5. FINDINGS FROM ANALYSIS OF THE CORPUS DATA

In our analysis of metaphorical, literal, and hybrid citations of *SEE*, we found five main meaning groups of metaphorical and hybrid senses and a few less frequent – and apparently less significant – senses. Because of the number of citations involved, we did not analyze citations of literal senses into separate groups. The five groups are:

(1) 'know' or 'understand': 161 citations
(2) 'interpret as': 110 citations

[3] Thanks are due to Dr Robert Maslen for undertaking the initial stages of analysis.

(3) 'witness': 107 citations
(4) 'control': 33 citations
(5) metonym for 'read' or 'study': 106 citations
other: 5 citations

All five groups include citations that seem to be hybrids as well as apparently pure metaphors. Considerably less contextual information is available than for the discourse data, making the decision which citations of *SEE* are purely figurative and which hybrid – having some element of literal meaning – highly subjective and we believe, in many cases unreliable. Therefore, we did not calculate figures for this dimension of the analysis.

We now describe the five groups in turn, with examples.

5.1 'Know' or 'understand'

The first group, in which *see* seems to mean 'know' or 'understand', consists of several clusters of sub-senses. In the largest of these (79 citations), *SEE* means something like 'find out' or 'construct knowledge', as in the following examples:

> Have students examine the data visualization video to *see* how scientists display, analyze and interpret scientific data.
> It will be interesting to *see* what actual remedies he is suggesting.

As with these examples, in the majority of citations *see* is followed by a wh-clause (72 of the 79 citations), showing a tight relationship between form and meaning. *See* is not followed by a wh-clause with any of the other four broad meaning groups identified in our data. Most of these citations seem to be hybrids; but, in some cases, more knowledge of context is needed to be certain. The metaphor describes coming to an understanding rather than being in a fixed state of understanding.

The Collins Cobuild English Dictionary (Sense 4) defines a second sub-sense that is very closely related: 'if you *see* that something is true or exists, you realise by observing it that it is true or exists', as in the following citation:

> Logan clearly has that winner's drive. You can *see* it the way she discusses her day with the conference PR.

Separating citations into these two groups proved difficult. The first group consists of those citations in which the person who 'sees' is progressing towards a currently unknown understanding; the second consists of those where the subject of the verb confirms knowledge though literal observation: this is a metaphor from metonymy (Goossens 1995, Barcelona 2001). Literal seeing is involved, but there is a

mapping onto the domain of knowledge. Deignan (2005: 61) describes the process this way: 'an expression develops a meaning though metonymy, a meaning that is then mapped metaphorically onto another domain'. The nineteen citations of this sub-sense are all hybrids.

The citations described so far tend to use a *seeing* verb in negative or modal form: that is, speakers and writers, when they use *see*, seem to talk not about a positive, objective sense of *understanding* but about *not* understanding, or about the possibilities for understanding or a person's ability to understand. Further examples demonstrate this:

> Perhaps Hollywood is waiting to *see* how the real story turns out.
> Both MOD and UK industry would wish to *see* the results of demonstrations and trials of electromagnetic launcher technology before considering the selection of a launch system.
> I can *see* why it would be a very useful ability to have if you belonged to a secret society.
> Just as he couldn't *see* what was going on under his nose with Florence and Ashburnham…

This semantic tendency is reflected in form: of the 98 citations of the two sub-senses discussed so far, *SEE* is not in the base form *see* in only eleven, because of the strong tendency for the verb to occur after modal verbs or in negative constructions. Of these eleven citations, in three *SEE* occurs in the expression *it remains to be seen* [+ wh clause], which expresses lack of certainty.

We classified the discourse markers *you see*, *I see*, and *let's see* as instances of the set of 'know, understand' senses. They are not modalized, but it seems likely that *you see* is an ellipsis from *do you see?* or *if you see what I mean?*: that is, the full form is modalized. *You see* is much more frequent than *I see*; there are 25 citations of *you see* or *see*, compared with three for *I see* and two for *let's see*. These expressions suggest approaching understanding – coming round to share another speaker's view – and so they share with the rest of the group the quality of subjectivity and of change (or *dynamism*) in moving from not knowing to knowing.

In the 'know, understand' group, we also included the use of *see* to describe predictions, which have modal meaning by nature (sixteen citations):

> I don't *see* Spain losing to South Africa. I would fully be expecting to play Spain on Sunday.
> But I actually *saw* that coming, and briefly considered nullifying the plans, and then decided against it.

Four semi-fixed figurative expressions seem to belong to this group because their meaning is associated with understanding: *see (no) reason/grounds/chance/point (in)* (seven citations), *hard to see* (five citations); *see the big picture* (three citations), and *see signs of* (two citations), as exemplified in the following expressions:

> I don't *see* any reason to carry on a conversation with the professional rumor mill.
> If he is not going to be defensive, it is hard to *see* where the story goes.
> Some members resisted at first. But they've *seen the big picture*, and now they 're patting me on the back.
> We are unlikely to *see any signs of* recovery for a couple of years.

This group of senses appears to represent the conceptual metaphor UNDERSTANDING / KNOWING IS SEEING. They are virtually all modalized, made tentative in some way, and lacking the objectivity that is often attributed to this metaphor, most specifically by Sweetser (1990). The 'find out' sense describes learning / coming to understanding; the 'know by observation sense' suggests moving from lack of understanding to developing an interpretation; while many citations of the 'understand' sense clearly describe a coming to understand – or failure to do so – that is subjective.

5.2 Interpret as

The second group of senses of *SEE* concerns people's interpretations of a situation. The most frequent (56 citations) is defined by the Collins Cobuild English Dictionary as: 'if you see someone or something as a certain thing, you have the opinion that they are that thing' (Sense 6). These citations take the grammatical form *see something as*, as in:

> In those cultures where women are *seen as* 'naturally' weak or vulnerable…

In a further 33 citations, the meaning of *see* is likewise associated with a partial or individual interpretation, but there is no explicit comparison; hence, the grammatical structure *as…as* is not used:

> Latin America is an eye-opener to Wright and she even *sees* everything differently upon returning to London where she grew up.
> That's one of my best sides people keep on telling me, or worst, depending on how you *see* it.

We include in this group a sub-group of fifteen citations in which *see* refers to somebody finding a particular quality in something. This sense seems to belong in the group because it shares the connotations of individual – perhaps partial – perceptions.

> They are put where the elders *see* local interest, often in impoverished, run-down neighborhoods, such as in Dorchester or Bridgeport.
> Janet Daley in the Telegraph, *saw* an 'intellectual decadence' she found 'repulsive'.

In fourteen of the fifteen citations, *see* is followed by a direct object; in the 15th, *see* is in the passive voice.

A small number of related citations – five – mention the viewpoint of the person whose perceptions are described and explicitly refer to their stance, sometimes using a metaphor of place. These always take the form *see [something] from*.

> Given the nature of this problem as you *see* it from the U.S. perspective…
> Don Baker has *seen* farming from both sides now – as a scientific researcher and as a farm consultant.

The fixed expression *see eye to eye* (one citation) seems to fit this group, because it refers to individual positions and interpretations and hints at other ways of interpreting these positions.

5.3 Witness

The third group of citations perhaps represent more objective knowledge. The Collins Cobuild English Dictionary defines this sense as: 'if a period of time or a person sees a particular change or event, it takes place during that period of time or when that person is alive' (Sense 9). To the best of our knowledge, this sense is not widely documented in the metaphor literature. It is fairly frequent in the Oxford English Corpus, possibly because – like many large modern corpora – the Oxford English corpus includes a fairly high proportion of both journalistic texts and texts from the Worldwide Web.

We separated the citations into those in which a person sees a change or event (78 citations) and those in which a time or place sees a change or something (28 citations), even though these are treated together by the dictionary, probably because the meaning of *SEE* seems to be very similar. However, in terms of metaphor, the nature of the transfer is different: when a person is described as seeing an event or change, the metaphor seems metonymy based; from literal seeing comes the abstract meaning 'know of / experience', as in the following citations:

> Are you likely to *see* $4 gas again in 2009?
> There 's this kind of media story that we *see* every few months.

A subgroup of citations consists of the fairly stable expressions 'would like to see' or 'want to see': i.e., they talk about desired changes (15 of 78 citations):

> I would also like to *see* businesses serving late night customers.
> 54-year-old Charles Murray wants to *see* something done before another accident happens.

Where a time or place is described as seeing an event or change, the time or place may stand metonymically for the people who live during that time or in that place: that is, there is a further level of metonymy, as in the following examples. While some of the previous group could be considered hybrids, none of these can.

> Although the later 19th century was to *see* the creation of the modern nation…
> In Glasgow, which *saw* a 20 % rise in the value of house sales last year.

A final citation that seems to belong with this group is in passive form without a named agent:

> It would also promote the interests of Formula One that motor sport be *seen* to institute a full inquiry into the events.

The emphasis of the metaphor is slightly different; nonetheless, we felt it to belong within the overall meaning of 'witness'.

5.4 Control

The fourth main metaphorical group is apparently unrelated to KNOWING IS SEEING, relating instead to CONTROLLING IS SEEING (Sweetser 1990). In this group (29 citations), *see* means 'cause':

> A vast programme of 'beautification' has *seen* 40 million flowers and tens of thousands of trees planted in Beijing alone.

Related to this are two phrasal verbs, *see through* and *see to*, each of which we found twice.

> We really owe it to Canada to *see* the Gomery Report through to the very end.
> Before she could leave, Louisa Hurst had an important matter to *see* to.

5.5 Read

In the fifth group, *SEE* is used as a metonym for reading or studying. In most citations from this group (92 of 116), *SEE* is used in the imperative to cross reference another part of the text or a different text. For example:

> The apostle Paul (*see* On The Road To Damascus), who wrote much of the New Testament…

In five citations it is used anaphorically, in citations such as:

> As we have *seen*, racism is systemic and routinely reproduces the subordinate position of people of colour.

In four of the five citations, *see* is found in the expression *as we have seen*.

In a further nine citations, *see*, meaning 'read', is more freely combining, as in:

> Judge Mahony said he had *seen* some papers and took the matter no further.

This final group seems intrinsically of less interest to an account of figuratively used *SEE*. The meaning is undoubtedly hybrid, having clear non-literal implications in all citations, but it seems to be a straightforward case of metonymical reference. The action of seeing is – with the exception of situations such as using Braille – criterial to reading or studying; its extension to cover these actions is uncomplicated.

The five remaining citations were not classified into any of the above groups. They comprise two citations of *seeing as* (meaning 'taking into account that'), one of *see the light at the end of the tunnel*, one of *see fit to*, and one of *see action*.

6. FINDINGS FROM THE DISCOURSE DATA

Forms of the verb *see* occur 472 times in the discourse data: 217 are literal uses referring to visual perception, 143 are metaphorical uses, and 112 are hybrid uses potentially concerned with visual perception in some way while having the potential for metaphorical meaning. We concluded that we had sufficient contextual information and familiarity with the content to attempt the classification, although we acknowledge that it is still subjective and would be difficult to replicate.

Metaphorical meaning thus applies in around 54% of uses of *SEE* in this data. This is very similar to the corpus data, in which metaphorical meaning was involved in 52% of citations (523 of 1000). Note that the corpus data is predominantly written, and several of the senses described above – notably where *see* is used to cross-reference within a text – are almost certainly exclusive to writing. The similar proportion of metaphorical use is likely therefore to be coincidental, though interesting.

Investigating the meanings associated with the forms and uses of metaphorical *see* reveals more about possible patterns. It shows that Sweetser's suggestion that *see* metaphors are used to imply objective knowledge does not hold – rather the reverse. The two most frequent meaning groups in the data are (1) *you* see used as discourse marker and (2) interpret as: *see [something] as [something]* (various phrases using the verb *see* with *as, how, way*, etc. to create analogies). Two significant formal patterns are found: (1) modal *see* (various forms of the verb *see* + direct object that incorporate modal/auxiliary verbs in the verb phrase) and (2) negative *see*.

6.1. 'You see' used as discourse marker

The discourse marker *you see* accounts for sixty of the metaphorical uses of *SEE,* including one question form *do you see?* Its function seems to be to appeal to other speakers to take on or understand temporarily the speaker's opinion or attitude: that is, it is an appeal for intersubjectivity, as seen in the following extracts.

in order not to,
make them feel suspicious,
or worried,
you *see* <@>.
you know,

you *see*,
I- I'm old school.
and I bought the Daily Mail,
all those years,
and I haven't stopped.

6.2. Interpret as: See [something] as [something]

Thirty-four metaphorical uses of *see* – that is, 13% of all uses where there is some metaphoricity – involve interpreting or imagining one thing in terms of another. Speakers use *see as* to set out for listeners an opinion or attitude held by themselves or attributed to others. Thus, this use specifically stresses the subjectivity of the opinion or attitude that follows.

the Arabs just *see* it *as* an injustice
and that will always be the way

terrorists do *see* it *as* a war

. I think I *see* it *as* a,
like a –
. .. i- i- it's ch- --
. it's chance

In each of these examples, the inherent subjectivity of the expression see as is further modalized, with *just* (in *just see it as*), with *do* (in *do see it as*), and with *I think*. The same function is played by several other forms in the data, with similar meanings. These include *that's how I/they see it* and *that's the*

way I/they see it. These senses incorporate the possibility of multiple interpretations. They highlight the choice of one out of several 'ways of seeing', often allowing that others may see things differently or emphasizing one's own view.

While this particular use may have been frequent in the focus-group discussions because the discussion topics included perspectives on terrorism, it is also relatively frequent in the corpus data, which come from a range of texts: the *see…as* metaphoreme accounts for 10% of non-literal citations in the corpus data. Percentages are not closely comparable: they could be skewed by the existence in one of the datasets of another, very frequent sense, such as the cross-referencing sense in the corpus data. Nonetheless, it appears that the frequency of this meaning in the discourse data was not unduly influenced by the controversial nature of the topic.

The existence of this meaning directly contradicts claims made for *seeing* metaphors in respect of objectivity. Discoursally, these *seeing as* metaphors highlight the inevitable subjectivity of understanding: a theme that plays out across both datasets.

6.3. Modal see

In addition to modal auxiliary verbs *can, could, would, might,* the metaphorical use of *see* was modalized in expressions such as *maybe they are seeing, I was pretty happy to see,* and *they want to see*, and in the following extracts.

> and nobody was doing anything,
> as far as ordinary people could *see*.
>
> I can *see* something,
> really kicking off eventually
>
> people like me and Finn,
> might *see* things different

Of the 25 uses of modal *see*, eleven were first person *I* uses, four were third-person *they* uses, and the remainder were claims about possible or probable understandings shared by people in general. The objectivity claimed for metaphorical *see* is again absent; instead, these uses underline the tentative or temporary nature of one's own understanding of the world or the understandings one imputes to others.

6.4. Negative 'see'

Twenty-one of the metaphorical uses of the verb *see* were in negative form.

but I couldn't *see* the point in doing that.

but you just can't *see* it happening

I can't just *see* any other reason,
why we would go in.
apart from oil,

no one's going to *see*,
.. everything exactly the same.

The negative forms include negated versions of each of the previous three types: *seeing as*, *you see*, and modal *see*. They are grouped together rather than being included in the first three groups, because their metaphorical use does not seem to be a straightforward inversion of the affirmative forms – as Conceptual Metaphor Theory and the idea of domain mapping would predict. In the spoken discourse, they are often emphatic – intensified with *just* or some other word – and function to highlight differences between the speaker's opinion, attitude, or belief about the future and that of some other person or group. They seem to function to resist or deny an understanding that is being imposed on the speaker.

To summarize the meanings of *SEE* found in the discourse data: each, in some way, is about multiple ways of seeing and about selections or preferences among these multiple possibilities. The discourse data suggest that *SEE* is used less to speak about what is known and more to speak about what is believed.

7. DISCUSSION

Findings from the corpus and discourse analysis seem to complement each other. In this section, we consider key issues across both datasets. *See* expresses a number of related concepts:

(1) change in the state of knowing: moving from not knowing towards knowing, often metonymically through visual perception;
(2) (lack of) understanding in the way that other people do, sometimes referring to a particular ability to "see" patterns that other people cannot or do not "see";
(3) interpretations and relative knowledge;
(4) witnessing by a person, time, or place;
(5) in a number of citations, especially where *you see* occurs, there is a persuasive element encouraging the hearer to perceive events in a particular way.

Each of these seems to be specifically subjective and partial, in contrast to the objectivity suggested by previous studies of the mapping, such as those discussed in Section Three. Many seem to be about alternatives, including hypothetical ones, and about views held by others. Some citations suggest that *see* is an important way of talking about other people's world views.

Collectively, these meanings suggest that metaphorical 'seeing' is not simply a way of expressing 'understanding'; it is more nuanced, more subjective. It is, perhaps, a better way of describing how people actually think than the word 'understand' offers, with its implication that reality can be directly and objectively accessed.

The corpus data shows a further two senses not found in the discourse data and not related to this mapping: (1) control and (2) read.

In terms of form, both datasets show a limited number of grammatical and lexical patterns associated with close but distinct meanings: that is, stabilities or metaphoremes. These include:

see [something] as
the way [somebody] sees it
see + wh clause
remains to be seen
see reason/ point/ grounds
see [something] from [place]

8. CONCLUSION

It would be of great interest to investigate related lexis such as *light*, *picture*, and *view* to determine whether similar semantic and formal patterns can be found. Each study of a single item is time consuming because many instances are needed – but ultimately, we feel, extremely worthwhile.

Our findings both challenge and confirm aspects of Conceptual Metaphor Theory. On the one hand, we have argued that some earlier descriptions of the mapping SEEING IS UNDERSTANDING are inaccurate and oversimplify what happens when *see* is used non-literally. On the other, our findings support the contention that people use metaphors to express concepts 'that simply cannot be easily or clearly expressed with literal speech' (Gibbs 1994: 125). The nature of human knowledge and understanding is, perhaps, one of those concepts; the literal terms 'know' and 'understand' cannot capture its nature as subtly as metaphors from the domain of vision can. Our findings on meanings of metaphorical *see* are likely to hold true for many metaphors. Cameron has argued extensively (e.g., 2003) that metaphor is used to manage alterity and modality, while Deignan (2010) claims that evaluation is one of metaphor's central functions.

Our findings are also consistent with the construal of language and thought as a complex dynamical system. In more than 1000 citations of non-literal *see* we have investigated, we find a

number of pockets of stability: of co-occurrence of detailed lexical and grammatical patterning with highly specific meanings.

Nothing that we have said in this paper is at odds with the central contention of Conceptual Metaphor Theory. However, our findings demonstrate how some interpretations of the theory, leading to sometimes sweeping generalizations about language, tend to mask the subtlety of metaphorical language at work in people's everyday interactions. We also hope to have highlighted the potential for giving language a central – rather than subordinate – role in analysis.

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The Role of Metaphor in the Structuring of Emotion Concepts

Conceptual metaphor theory (CMT) is one of the most prolific frameworks in the study of emotion concepts. Following the seminal work of Lakoff and Johnson (1980) and subsequent work by Kövecses (1986, 1990) and Kövecses and Lakoff (1987), an impressive number of studies in cognitive linguistics and psycholinguistics have sought to document and confirm the claim that conceptual metaphor (CM) structures affective concepts. I attempt a brief overview of CMT claims about and CMT-inspired research on emotion concepts. I continue by presenting a study based on data collected in six languages, to assess the role of CM in the structuring of emotion concepts. I introduce the procedure, the corpus, and the analyses that have been carried out, including a detailed discussion of the considerations that informed the coding decisions applied to the corpus in a tentative quantitative analysis. Finally, I highlight a series of difficulties and controversies raised by CMT-driven analysis of emotion concepts that could be employed in hypothesis-driven experiments to test conceptual processing claims made within CMT.

Keywords: emotion concepts, emotion metaphor, affective knowledge, Romance languages, Scandinavian languages.

1. INTRODUCTION

1.1 CMT: Claims on the Structuring of Emotion Concepts

According to one of CMT's foundational claims, emotion concepts are metaphorically structured:

> …Although a sharply delineated conceptual structure for space emerges from our perceptual-motor functioning, no sharply defined conceptual structure for the emotions emerges from our emotional functioning alone…. Metaphors allow us to conceptualize our emotions in more sharply defined terms.

CMT posits that only a few basic domains and concrete concepts emerge directly from bodily experience: e.g., spatial orientation, containment, force, and temperature. All abstract concepts – including emotion concepts – are indirectly grounded in these basic domains by sets of enduring metaphorical mappings, whose purpose is to assist understanding the more abstract concepts in terms of the more concrete ones (Kövecses 2000: 4).

In CMT's most radical claims, metaphorical representation is automatic and obligatory (Lakoff and Johnson 1980, Lakoff 1993), being the structuring principle for much of one's conceptual system:

[1] This study, which was first presented at the *Dynamics of Metaphor* workshop (Aarhus 2009), is the result of research conducted while the author was based at the Center for Semiotics, Aarhus University.

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i.e., the non-sensory, non-perceptual concepts. This entails that 'emotion concepts emerge from metaphors' (Kövecses 1990: 4). One implication of this claim is that metaphorical mappings become built into the knowledge retrieval functions of the brain. If so, then accessing an emotion concept necessarily means activating concepts of space, brightness, force, or other physical domains (Meier and Robinson 2005) that are usually mentioned as structuring sources in the CMT literature. Another consequence is that non-metaphorical conceptualizations may not be possible for emotion concepts.

In a less radical interpretation, metaphor is only partially responsible for the representation of abstract concepts, and only 'certain aspects of emotional concepts are actually created by metaphor' (Kövecses 1990:204). Metaphor's role is that of creating the richness of emotion concepts (Kövecses 1990: 205) that otherwise would have quite a poor conceptual structure: e.g., the concept of love would have 'a minimal nonmetaphorical structure with a lover, a beloved, a love relationship, and not much more' (Gallese & Lakoff 2005: 470). This skeletal structure is then enriched by more than a dozen CMs, allowing one to conceptualize love in terms of journeys, magic, heat, etc. Metaphor remains important for creating and constituting one's emotional reality, and conceptualization has actual consequences on experience (Kövecses 2000: 6).

This less radical view is compatible not only with non-metaphorical content being constitutive of emotion concepts but also with alternative structuring principles. Prototypes, image schemas (hereafter IS), metonymies, and related phenomena may all interact with metaphor. Although the CMT literature abounds in discussions of the interactions between metaphor and metonymy or metaphor and IS, such discussions – with some exceptions – are not integral to how the CMT tradition is applied in analysis of emotion concepts. As a consequence, alternative structuring principles tend to remain external to the process of coding and classifying the linguistic data. So while EMOTION IS HEAT may be identified theoretically as metonymy, in analyses it is invariably counted among metaphors. SCALE may be explicitly posited to be a multimodal schema emergent from both exteroceptive and interoceptive experience, but in the metaphor count it is analyzed as metaphor, without further justification. The concern may be that treating these examples as e.g. metonymy-afforded raises the risk that the necessary or obligatory character of metaphor in the emergence of emotion concepts might get passed over.

1.2 CMT and Emotion Concepts: A Methodological Overview

Methodologically speaking, an introspective approach dominated studies of emotion concepts during CMT's first two decades. A complete review of these studies is beyond the remit of this paper. In what follows, I rely on Kövecses' work – Kövecses has been and continues to be among the most influential and prolific researchers in this area – to outline the claims and evidence put forward.

The methodological decision of focusing on figurative language to access conceptual structure is grounded on the claim that, since metaphorical expressions are systematically tied to metaphorical concepts, studying metaphorical language can facilitate understanding of the metaphorical nature of

one's concepts and activities (Lakoff and Johnson 1980: 7). CMT researchers insistently claim that, by overlooking figurative language, alternative approaches to emotion concepts overlook what is arguably the most important source for understanding the structure of emotion concepts. These approaches were harshly criticized by Kövecses for relying on biased eliciting methods such as self reporting and questionnaires. CMT focused instead on 'local vocabularies': a methodological decision intended to lead to unbiased reconstruction of 'culturally defined emotion concepts' so that 'antecedents, cognitions, subjective feelings, physiological and behavioural responses, control mechanisms… associated with emotion all find their natural place within the same model' – contrary to the 'often one-sided attempts in our theorizing about emotion' (Kövecses 1990: 5) that produce a 'gross oversimplification and a complete distortion of our experiences' (Kövecses 1990:15) of any given emotion. CMT scrutiny of local vocabularies extracts the 'most common and important emotional experiences of a community' allowing for 'a better fit… between the way we conceptualize emotions… and what we experience when in some emotional state' (Kövecses 1990: 214).

CMT's introspective methodology begins with the analyst's intuitions on how people talk about various emotions so as to obtain an inventory of linguistic metaphors. The next step assesses metaphor systematicity by identifying source domains, classifying the examples accordingly, and extracting the underlying mappings or CMs. In the process, one may optionally identify the master-CM, as it has been termed by Kövecses: a CM that captures many aspects of the concept and is highly elaborated in terms of its metaphorical entailments and conventionalized vocabulary. Finally, one may optionally propose experiential motivations for the CMs identified.

Since a number of emotions are said to be basic and universal – the precise number and inventory varies, however, from one researcher to another – and since the bodily constraints invoked as motivating the CMs that structure emotion concepts are universal, one might expect that some mappings are likewise universal. Starting with CMT's second decade, the introspective approach was applied cross-culturally to assess the universality of various mappings and master metaphors. Among the best documented is the structuring of the concept of anger in terms of the metaphor ANGER IS A HOT FLUID IN A CONTAINER, following the seminal study in (Kövecses 1986). Mappings consistent with this metaphor have been proposed for several unrelated languages such as Chinese (Yu 1995), Hungarian (Kövecses 2000), Japanese (Matsuki 1995), Polish (Mikolajczuk 1998), Spanish (Soriano Salinas 2003), Tunisian Arabic (Maalej 2004), and Zulu (Taylor & Mbense 1998). The cross-linguistic evidence has been interpreted as indicative of cross-cultural conceptual consistency: 'the short answer to the question of why emotion concepts in diverse cultures share a basic structure is that the cultures also share a central metaphor that informs and structures the concepts (i. e., the folk understandings). This is the CONTAINER metaphor' (Kövecses 2000: 146).

Kövecses proposes also an alternative master metaphor that constrains people's universal ways of understanding emotions: EMOTION IS FORCE. This universal CM is an entailment of the conceptualization of emotions as causes, which in turn is entailed by the fact that, in the EVENT

STRUCTURE metaphor (Lakoff and Johnson 1980, Lakoff, 1993), causes are conceptualized as forces. In this respect, emotions are conceptualized as forces (with instantiations such as fire, natural forces, etc.) that bring about certain responses. From this master-CM a consistent and systematic conceptualization is said to emerge, that distinguishes the emotion domain from other domains (e.g. rational thought, relationships, etc.). Moreover, due to the FORCE metaphor, it would be impossible to conceptualize most aspects of emotion concepts in other than metaphorical terms (Kövecses, 2000:85).

CMT's introspective methodology has been criticized for being inherently eclectic and opportunistic, making it difficult to assess whether the lists of posited mappings are either complete or representative of how people talk and reason about emotions. Meanwhile, an exclusive concern with confirmatory evidence makes it difficult to draw any credible generalizations. This is especially true of cross-linguistic CMT studies, which appear to be less interested in emotion concepts as such, focusing instead on verifying the presence in a given language of certain mappings, which sometimes requires slight internal reorganizations of the assumed mappings. Since, by definition, the introspective approach relies on decontextualized examples, no systematic confrontation of metaphorical vs. non-metaphorical language – as employed in actual conversation or reasoning about emotional experience – and no systematic assessment of CM's role in structuring emotion concepts across contexts and types of knowledge is carried out. This is even though in a self-report study – to take one example – Ortony and Fainsilber (1987) found two particular aspects of affective experience – subjective feeling and high intensity – more likely to be communicated by use of metaphors, both novel and frozen.

By the end of the '90s, corpus-based methodology began to be applied to CM studies of emotion concepts: e.g., (Deignan 1999), which examines the use of the temperature lexis in the emotion domain. It has proven able to deal with some of the criticisms outlined above. As Stephanowitsch (2005) observes, it allows CM data to be examined and quantified more systematically and generalizations to be drawn about the significance of various source domains and mappings for a given target concept. Meanwhile, Turker (2010) observes that, although she is able to identify mappings consistent with those assumed universal by previous studies – mainly looking at Lakoff and Kövecses – corpus-based frequency and productivity measures indicate that these are not the representative metaphors for the Korean concepts of sadness and happiness. She admits also that several of the identified mappings could better be analyzed as metonymies instead of metaphors.

Corpus-based methodologies allow well-established metaphors to be reanalyzed and their systematicity and significance reassessed. In the process, new insights may be gained on the preponderance of lexical classes or degrees of metaphoricity,[2] and the role of CM across contexts and interaction types can be assessed. In a series of studies, Beger (2011, Beger & Jäkel 2009) compares counselling contexts to movies and academic discourse; consequently, she finds that the extent to which people employ metaphors when talking and reasoning about anger, love, and sadness vary with respect to discourse goal, discourse structure, and type of interaction. Across these various genres,

[2] See Oster 2010 for a study on the concept of fear.

metaphorical language appears to account for only a modest percentage of emotion-specific talk: 9.8-15.6% of the emotional language used by experts and 8.1-20.9% of that employed by lay people.

Corpus-based CMT studies can still be criticized for circularity, since CMT's representational claims rely exclusively on linguistic data. Such data can be misleading: linguistic patterns may not reflect conceptual updating. Even though people continue to speak of the sun 'setting' and 'rising', that does not mean they continue to reason in a geocentric way; it testifies instead to a dissociation between lexicalization and conceptualization (Ortony 1988: 103). Even when noncontroversial evidence of linguistic universals is available – such as the systematic association of *good* with *right* and *bad* with *left* – straightforwardly inferring conceptual universals may lead to incorrect conclusions. In a series of experiments aimed at testing a body-specificity hypothesis, Casasanto (2009) shows that, unlike right-handers and contrary to what one would expect if relying on linguistic data alone, left-handers tend to associate leftward space with *positive* valences.

Many of the psycholinguistic experiments that put to test emotion-related CMT claims address affect broadly – (most of the time instantiated by valenced stimuli, such ase.g. *hero* or, *criminal* –) and are derived from the automaticity hypothesis: if affective concepts are metaphorically structured, then the encoding or representation of affective stimuli should be biased by physical aspects, and activation of perceptual and sensory processes should be observed during performance. These experiments focus on dimensional affect metaphors: i.e., the mappings of evaluative performance onto continuous dimensions such as vertical position, brightness, size, and distance –, departing from the orientational metaphor GOOD is UP (and the derived metaphor MORE IS GOOD), which predicts that words related to up (and down) have consistent apply systematically to a variety of positively (and negatively) valenced concepts. The findings reveal consistent associations between valence and verticality: positive evaluations are made more quickly when words are displayed toward the top of the screen (Meier & Robinson 2004), presented in large fonts (Meier *et al*. 2008), or confirmed by finger press of a key rather than foot press of a pedal (Meier & Hauser 2008). Similar effects have been found with respect to memory processing (Crawford *et al*. 2006; Casasanto and Dijkstra, 2010) and attention (Meier & Robinson 2006.

Even though these correlational findings show a clear and consistent association of affect and physical dimensions, it is debatable whether they should be taken as evidence of CM, since they are consistent with predictions made by any situated or embodied approach to cognition and most theories of learning. When the focus is on testing the role of specific mappings in structuring specific emotion concepts – rather than the generic mapping of affect onto physical dimensions as described above – the evidence remains inconclusive, either confirming (e.g., Gibbs 1992, 2006) or failing to confirm (e.g., Glucksberg & McGlone 1993, 1999; Haenggi *et al*. 1994; McGlone 1996; Keysar *et al*.2000) CMT's predictions.

2. METHODOLOGY

2.1 The corpus

The corpus analysed here consists of 475 responses randomly selected from a larger pool of data obtained in a supplemented free-listing task. Participants were first asked to list as many examples as possible of an affective category (Bokmål Norwegian *følelse, kjensle*; Danish *følelse*; Swedish *känsla*; Castilian Spanish *emoción, sentimiento*; Italian *emozione, sentimento*; Romanian *emoţie, sentiment*) in two minutes, then invited to successively select the three, then the one example that best represented the superordinate category. Finally, in a reasoning task, participants were asked to account for their choice of best exemplar. To do so, they were instructed to first to describe the general category, then describe the example that was selected, and finally show how their description of the exemplar matched that of the category. All participants were non-expert undergraduate students enrolled predominantly in business, economics, political science, architecture or IT classes and data collection took place in the beginning or at the end of their classes. The data were obtained Autum 2008 with the exception of the Danish and Castilian Spanish data which were collected in February and March 2009. The distribution of these responses across languages and superordinate categories is presented in Table One.

Language	Eliciting category	Category code	Number of responses
Danish	FØLELSE	DAF	25
Norwegian	FØLELSE	NOF	50
	KJENSLE	NOK	50
Swedish	KÄNSLA	SWK	50
Castilian Spanish	EMOCIÓN	SPE	50
	SENTIMIENTO	SPS	50
Italian	EMOZIONE	ITE	50
	SENTIMENTO	ITS	50
Romanian	EMOȚIE	ROE	50
	SENTIMENT	ROS	50

Table 1: Distribution of responses across languages and eliciting categories.

2.2 Choice of eliciting categories

Since the purpose of the study was to access lay persons' concepts of emotions through language, it was important first to identify the relevant superordinate category or categories in the affective domain. From the perspective of functional equivalence, these should be part of the active lexicon native speakers commonly employ in everyday interactions and be those eliciting exemplars such as

anger, fear, and love. Back translation, superordinate category production, as well as consultation of native speakers and dictionaries (see Sauciuc, 2012 for a more detailed description of the procedure) were employed in order to ensure the functional equivalence of eliciting categories across languages. Solutions found to be convergent across these sources were then retained for the purposes of data collection. The two Norwegian terms sampled have the status of geo-synonyms, *følelse* being used in Bokmål Norwegian and *kjensle* prevalently in Nynorsk Norwegian. However, *kjensle* is included in contemporary Bokmål dictionaries; native speakers suggested that a comparison of the two would be interesting. The Romance superordinate categories retained for data collection form two series, represented by two labels. One label derives from a verb meaning 'to feel' (Romanian *sentiment*[3], Italian *sentimento*, Castilian *sentimiento*), one indirectly related to the Latin *emotione(m)* (Romanian *emoţie*, Italian *emozione*, Castilian *emoción*). In expert terms, this translates into a primary (*emotione(m)*) vs. secondary (**sentimentu(m)*) emotion dichotomy.

3. ANALYSIS AND RESULTS

3.1 Data analysis: General considerations

I approached the data from the perspective of a researcher interested in emotion concepts in general and the role that CM plays in their structuring in particular. Data analysis was carried out in two stages: qualitative and exploratory analysis (Section 3.2) followed by tentative quantitative treatment of the 475 responses. The data was stored, coded, and analyzed using the software QDA Miner from Provalis Research.[4]

3.2 Stage One: Qualitative analysis

Responses were carefully read several times and analyzed for the themes / types of knowledge respondents mentioned more readily when explicitly asked to consult their concept of emotion, and for the strategies they employed in accessing this knowledge. Preliminary examination of the data indicated a great degree of systematicity in the responses, both within and across data sets. Three broad strategies for accessing affective knowledge emerged: taxonomic, gestalt and partonomic. Using the taxonomic strategy, respondents responded by accessing knowledge relating to hierarchical class inclusion and then providing a more generic category – state, state of mind, state of soul, phenomenon, etc. – for the eliciting superordinate category. Using the gestalt strategy, respondents responded by approaching emotion concepts as holistic entities characterized by generic valence or arousal

[3] In the Western Romance languages, the word supposedly derives from the verb 'to feel' and was already in use early on. In Romanian, it is a recent borrowing from Italian or French; even the older term *simţământ* was borrowed from French. An older term for referring to a general affective category, *simţiciune*, is no longer in use.

[4] http://provalisresearch.com/products/qualitative-data-analysis-software/.

properties, or by opposing emotional experiences conceived holistically to other kinds of experiences. Finally, using the partonomic strategy, respondents accessed emotion concepts by selectively focusing on particular components of an emotional response: antecedents, physiological activations, behavioural responses, mentalizing and cognitive biases, etc. It was interesting to note the ease with which respondents switched from one strategy to another. This may be taken as indication that multiple strategies were used in structuring – what could be expected to be – modal concepts of emotion.

Code name	Acronym	Description
Actor	**ACT**	Entities (people, objects, situations) mentioned as being involved in the experience of this specific affective state
Affective experiences	**AF**	Other affective states than the eliciting category and the best exemplar
Behavioural responses	**BH**	Expressive or instrumental behaviour: smiles, cries, shouts, hits, runs away, etc.
Cognitive processes	**COG**	Knowledge related to perception, memory, motivation, volition, decision making, creativity etc., such as intrusive (obsessive) thinking, perception, reasoning or decision biases, e.g. *When you feel X, you cannot think of anything else / The world around seems to change / You make decisions you would make otherwise*
Control	**CR**	Control or broadly relation to cognition
Degree of arousal	**DA**	Intensity of experience
Dynamics	**DYN**	Knowledge related to the emergence, duration, unfolding, oscillation and end of the affective experience
Physiological responses	**FZ**	Physiology – mentions of autonomic responses (referring to heart rate, digestion, respiration rate, salivation, perspiration, etc.). Includes mentions of neural or hormonal processes
Importance	**IMP**	Personal and cultural meaning
Localization	**LOC**	Localization of the source or place of manifestation location of the affective experience; usually via mentioning specific behavioural or physiological responses
Subjective feeling	**SF**	Including hedonic valence, verbs and nouns of experience, but also any other reference to the phenomenology of emotion

Table 2: Overview of secondary codes (types of emotion knowledge).

The three strategies appear to correspond to different levels of abstractness of analysis, with the partonomic strategy operating at a more concrete level than the others. While respondents explicitly categorized affective experiences as states, an implicit categorization of these as processes emerged from their responses. This contrasts with Kövecses' claim (2000: 1) that lay persons categorize emotions as passions, while experts categorize them as actions or states.

Qualitative analysis was used to extract the kinds of affective knowledge reflected in the responses and then construct a code book (see Table 2). The code book was used to verify whether aspects of emotion knowledge are or are not more readily structured by CM (Section 3.4), since Gallese and Lakoff (2005) and Kövecses (2000) have claimed that only the most skeletal concepts of emotion can be constructed independently of metaphor.

3.3 Stage Two: Quantitative analysis

3.3.1 The general approach to coding and the main codes

In line with the commitment made in Section 3.1, both the CMT literature and alternative approaches to emotion concepts informed coding decisions. The CMT sources were examined for best practices from previous studies of emotion concepts (see Section 1.2), metaphor identification procedures, and reports on the interactions between metaphor and other structuring principles: metonymy, IS, prototypes, and cognitive models. Non-CMT sources included alternative approaches to concepts in general and emotion concepts in particular. Besides theoretical considerations, I examined the experimental evidence based on probabilistic, dimensional, theory-based, and alternative embodied models, as well as hybrid models. Finally, literature was consulted that reflects a graded view on embodiment of abstract thought: primarily relevant neuroscientific evidence on IS, spatial relations, and motion and action verbs. All these have been described in the CMT literature as instantiating physical domains that metaphorically structure emotion concepts. Given the questions that motivated the study, this approach – confronting CMT and alternative explanations of the same data rather than looking for confirmatory data – was deemed more profitable for assessing the plausibility that given instantiations of supposed mappings are indeed metaphorical, cross-domain mappings.

Corpus analysts have often pointed out that, when approaching natural language data for purposes of CMT analysis, it is very difficult to set reliable criteria for CM identification: 'an exhaustive annotation will confront the researcher with many cases that are not clear cut' (Stephanowitsch 2006: 10). Instead of an all-inclusive approach as practiced by e.g. the Pragglejaz group, I have followed the advice of (Wallington *et al*. 2003) in considering it important to mark the certainty an annotator feels in annotating something as metaphorical. In my analysis, I applied the code *M* for metaphorical to cases that – in line with considerations that I will outline thoroughly in Section 3.3.2 – are plausible instances of CM and most likely to have direct conceptual implications. The code D was applied to those cases that were deemed debatable instances of CM.

I call this analysis *tentative* because its aim is by no means to provide any definitive answer to the question how many metaphors people use when consulting their emotion concepts. Indeed, *no* single set of empirical data could provide a definitive answer, given the many factors – individual cognitive style, mood, type of interaction and interactional goals, relationship with the interlocutor (to name just the most obvious) – likely to impact on the degree of metaphoricity of any given interaction, regardless of the cognitive domain in focus. Rather, the purpose of this investigation is to contribute to the debate on how to plausibly code for CM, taking into account evidence from and explanations proposed by alternative approaches to conceptualization. I also feel it important to identify recurrent cases that – in light of opposing evidence – may be seen as controversial, so as to gather a database of stimuli for more targeted hypothesis-driven testing of CM's role in structuring emotion concepts – following e.g. the steps outlined in (Cardillo *et al*. 2010) for the concept of time. The tasks I employed

for purposes of data elicitation were never expected to maximize metaphorical language; instead, they were chosen for gaining access to the most salient types of knowledge structuring lay persons' emotion concepts at both a general and more basic level of abstractness. Such data should afford an assessment of whether any of these types of knowledge are either exclusively or primarily structured by metaphor.

3.3.2 Circumscribing the application of codes

Coding decisions were guided most directly by theoretical assumptions in, and examples provided by, CMT studies of emotion concepts. Although CMT has evolved continuously – incorporating new elements and perspectives – its fundamental claim remains that, through CM, concrete domains directly associated with sensorimotor experience and representation lend structure to abstract concepts, including emotion. Basicness, concreteness, and direct experience can thus be set as CM filter for assessing why emotion does not satisfy these requirements and supposed source domains do. I will discuss these criteria, beginning with experiential and ontogenetic basicness, continuing with the relationship between basicness and concreteness, and ending with semantic basicness. Before discussing semantic basicness, I introduce relevant coding decisions of a general character: relational language, event-related language, etc. I reserve discussion of coding decisions concerning single words for the section dedicated to semantic basicness.

Experiential basicness. Emotion concepts pose a challenge to the basicness criterion: it is difficult to explain why emotions do not constitute a basic domain of experience allowing for direct emergence of concepts. Emotion researchers commonly agree that emotion concepts are gradually acquired and stabilized by linking observable properties – various elicitors and behavioural manifestations such as voice pitch, facial expression, and gestures – to subjective feelings. In confronting CMT analyses, it is difficult to see how a frequently posited source domain such as magic (EMOTION IS MAGIC) constitutes a more basic, more direct experience than emotion.

Ontogenetic basicness. When basicness is understood in terms of cognitive conceptual development, the common view is that infants possess spatial and motion concepts exclusively; they develop more abstract concepts only after they begin to acquire – or, more accurately, produce – language, approximately by their third year. CMT invokes the ontogenetic basicness criterion in two more specific ways: in relation to the emergence of IS (next section) and in theoretical discussions of the theory of domain conflation in infancy (e.g. Lakoff and Johnson 1999)[5]. According to CMT, experiential domain bindings in infancy later, in the process of domain individuation, motivate metaphorical mappings in conceptualization.

[5] Lakoff and Johnson (1999) quote Christopher Johnson's observation that, after an initial period of domain conflation in which children do not discern the existence of different domains of experience, a stage of domain separation follows, at which point cross-domain metaphorical mappings arise. Joseph Grady (2005) views primary metaphor – said to generate universal, image-schematic structure that affords complex metaphor – as developing after a stage of conflation. His notion of *correlation metaphor* (1999) is also relevant here.

Emotion concepts may not fit this criterion, either. Contrary to the common view outlined above, evidence from infants and toddlers enrolled in a symbolic gesture programme at the University of California, Davis (Vallotton 2008) indicates much earlier command of emotion concepts. Infants use symbolic gestures not simply for telling others how they feel, but also (by nine months) for clarifying their internal states after a caregiver's misinterpretation, reflecting (15.2 months) on the cause of or response to emotions they observe in another child, reflecting (11.1 months) on their internal states in past experiences, and even expressing (14.7 months) thoughts about emotions. In light of this evidence, the emotion domain may only be compatible with a very weak version of CMT: to wit, emotion concepts possess a great deal of metaphor-independent structure.

The relationship between ontogenetic basicness, IS, and concreteness. The CMT literature defines IS as conceptual primitives that afford metaphorical mappings, mediating the conceptualization of abstract domains. They have been characterized as continuous analogue patterns underlying conscious awareness, prior to and independent of other concepts (Lakoff 1987). They are directly meaningful, arising from recurrent sensorimotor experiences that cumulatively capture multi-modally available information.[6] Notice that, according to this definition, IS may be incorporated directly by emotion concepts in a metaphor-independent way, as soon as one accepts that interoception contributes as much as exteroceptive experience to their emergence.

IS may dissociate from CM in another way. Jean Mandler – author of the most systematic work on IS in a developmental framework – agrees with the CMT literature that the first and only concepts available to preverbal children are those of objects and spatial relations: e.g., ANIMACY, PATH, CONTAINER; these in turn support the emergence of abstract thought. However, Mandler's views on IS (e.g., 2008) differ fundamentally from the analogue, experientially rich schemas posited in the CMT literature – especially the more recent simulation-based views on metaphor (Ritchie 2008, Gibbs 2006). Mandler postulates instead a shift from concrete to abstract representation of spatial relations, where domain-specific details of e.g. agents and objects are lost before IS can be mapped onto language. Once abstracted, spatial relations become 'domain-less' relational structures. Texts where spatial vocabulary accomplishes such a relational function might be difficult to interpret as CM, given that CMT argues for the existence of mappings to specific source domains, from which rich knowledge is recruited in the conceptual processing of target domains.

Conceptual basicness and concreteness. Experiential or conceptual basicness is sometimes understood in terms of concreteness, itself understood in terms of compositionally simple, object-like properties. Objects perceived as simple gestalts, with their characteristic behaviour, are the preferred candidates for the basis of one's general conceptual system. The relevant point here concerns the plausibility of the EVENT STRUCTURE metaphor posited by Lakoff in his earlier works, widely

[6] In one of the earliest definitions, an image schema is described as 'a recurring dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience….'Experience' is to be understood in a very rich, broad sense as including basic perceptual, motor-program, emotional, historical, social and linguistic dimensions' (Johnson 1987: xiv, xvi).

employed by Kövecses and his followers for claiming the omnipresence of metaphor in the structuring of emotion concepts (Section 1.2). According to this CM, events and actions are conceptualized as objects, activities as substances or self-propelled movements, states as containers, causes as forces, purposes as destinations, means as paths, difficulties as impediments to motion – features which, by virtue of the principle of inheritance, are available to emotion concepts as well. In Lakoff's more recent wrork (e.g. Gallese & Lakoff 2005), the various elements of this CM are reassessed as so-called COGs or as IS.

In psychology, the notion of event structure explains how, in perception, human beings break down the continuous flow of stimuli into smaller, more manipulable chunks reflected in their conceptualization of events (see e.g. Zacks & Tversky, 2001). A great deal of evidence – including evidence from developmental psychology and comparative cognition – suggests a partonomic rather than metaphorical structuring of event-structure representations in a variety of conceptual tasks. Such is the case with the data presented here, which suggest that people predominantly access affective concepts partonomically (see Section 3.2 and Table 3) – focusing first and foremost on antecedents; physiological, behavioural, cognitive, and phenomenological concomitants; and consequences of affective experience.

The special status of emotion concepts in relation to the concreteness criterion is confirmed by the special status of emotion words. Although generally judged to be abstract, experimental evidence shows that they are higher in imageability and context availability than other abstract words. They are faster to recall than both concrete and abstract words, and they rank highest in number of associated words (Altarriba, Bauer & Benvenuto 1999; Altarriba & Bauer 2004). Emotional experience and vocabulary is posited (Vigliocco *et al*. 2010, Prinz 2005) as an important source of semantic-representational structure for other domains.

IS and concreteness in the brain Carefully controlled neuroscientific experiments support the implications of Mandler's view of IS: spatial and motor vocabulary, when used figuratively, is processed in terms of highly abstract relational schemas exploiting grammatical and lexical information, rather than activating sensorimotor areas involved in processing spatial-relation percepts – as mapping onto a source domain would seem to predict. So e.g. the processing of abstractly used motion verbs does not overlap with the processing of the same verbs in concrete contexts (Wallentin *et al.* 2005). The latter recruits motor areas corresponding to e.g. hand, foot, and mouth actions, while the former does not (Aziz-Zadeh & Damasio 2008, Raposo *et al*. 2009). Both clinical and brain-imaging evidence suggest the existence of a dual, verbal vs. non-verbal format for storage of the spatial relations encoded by prepositions. Kemmerer and Tranel (2000) report a double dissociation between the linguistic and perceptual representations of spatial relations: first, a dissociation between processing verbally and perceptually accessed spatial concepts; second, a dissociation between processing concrete vs. abstract meanings of these concepts. In light of such evidence, Chatterjee (2010) proposes a graded foundation for abstract thought, involving progressive disembodiment based

on a shift in level of abstraction from analogue percept to digital language. This is consistent with the existence of three functional anatomical axes to neural processing: a left-right axis involving lateral differences in processing perceptually vs. lexically accessed sensorimotor information, a ventral-dorsal axis involving a representational shift from objects to relationships between objects, and a centripetal gradient from sensorimotor towards perisylvian cortices reflecting a transition from sensory information to more language-like content and finally to language proper.

Metaphor and lexical classes. The above evidence highlights the systematic processing differences between the concrete use of words and the abstract use of relational schemas, *contra* CMT predictions. Moreover, it highlights the heterogeneity of the CM construct.[7] The heterogeneity that is of interest here involves lexical classes[8] and the degree of metaphor conventionalization. Evidence points towards the differential processing of nominal metaphor – presumably supported by comparison and categorization (Bowdle & Gentner 2005) on the one hand, and verbal, prepositional and – to some extent – adjectival metaphor on the other. The latter might better be approached as the result of a progressive process of abstraction, whereby the concrete, sensorimotor features of a verb/preposition/adjective are stripped away, retaining only a few core conceptual attributes for metaphorical use (Bendny *et al*. 2008; Chatterjee 2008, 2010; Chen *et al*. 2008; Wu *et al*. 2007): an explicit mapping of one semantic domain onto another might not be needed (Schmidt *et al*. 2009). Metaphor annotators observe that, while it is easy to identify source domains for nominal metaphors, it is difficult to establish them for adjectives, verbs, and prepositions.

Abstractness and degree of metaphoricity. Similar reasoning applies to evidence pointing to the differential processing of novel vs. conventional metaphor in a manner consistent with the *career of metaphor* theory (Bowdle & Gentner 2005), which postulates a continuum from novel to familiar (conventional) to dead metaphor. Novel metaphor is processed by mapping the – most often relational – semantic attributes of one concept onto those of another. Conventional metaphor is processed by categorization. Schmidt and colleagues (2009: 3) show that – consistent with Chatterjee's (2010) proposal for functional neuroanatomic axes – most imaging studies employing conventional as opposed to novel metaphor fail to find right-hemisphere activation. One plausible explanation is that, as metaphors become familiar and categorized, they rely more on left-hemisphere lexical processes. In other words, the likelihood that source domains have conceptual implications for the processing of metaphorical language decreases with degree of conventionalization.

This lengthy discussion was necessary to account for the coding decisions made in this study with respect to spatial language when used with a relational function – often instantiated by event-related vocabulary such as 'originates', 'derives', 'happens', 'begins', 'ends', 'lasts', and 'causes'. I have generally coded this vocabulary as *D* (uncertain instances of CM) for several reasons. Developmental psychology and neural evidence on the one hand and CMT claims on the other appear to point – at

[7] For more detailed discussion, see (Cardillo *et al*. 2010).
[8] For a review, see (Martin, Ungerleider & Haxby 2000).

least in some respects – in different directions. This vocabulary seems to provide an alternative means of expressing emotion-related knowledge that could be directly grounded in experience and acquired early in life. In most cases, it could be interpreted as instantiations of IS that can be incorporated directly into emotion concepts. The retrieval of a richly detailed source domain allowing for specific mappings is problematic. However, where a more specific source domain clearly was retrievable, I coded the data as *M*.

Consider a verb that translates as 'give'. In contexts of abstract causation, I coded it *D*, since in those cases it appears to instantiate a highly abstract, schematic meaning detached from sensorimotor richness. However, in cases instantiating the transfer sense of the verb (e.g., *one gives love*), I coded it *M*. A similar situation arose for verbs of motion employed in a highly abstract, schematic manner – e.g., instantiating a generic sense of 'originate' – without being reminiscent of any specific source domain.

Semantic basicness. Existing procedures from e.g. the Pragglejaz group (e.g. 2007) rely on semantic basicness, as reflected in lexicographic sources, to identify metaphorical words: an approach that, at first glance, seems to allow for more precise, clear-cut decisions. Although I have retained and employed the criterion of semantic basicness throughout this study, I have departed from the Pragglejaz group's procedure for several reasons, but primarily because of their explicitly stated lack of concern with conceptual processing implications and the intermediary steps by which linguistic data are transformed into a propositional format.[9]

The criterion of semantic basicness, as reflected in lexicographic sources, may be misleading when employed as the *only* criterion for positing conceptual implications of metaphorical language. In some cases, this is due to dictionary limitations. Dictionaries are far less dynamic than other sources one might use: slower to incorporate new language usage or capture the changing state of what people feel to be more basic language use. In some cases, it might not even be possible to compare the situated meaning of a term with its dictionary-coded senses, perhaps because lay persons' intuitions – which are expected to constrain processing – do not fit the dictionary entries.

One such case is the antonymic pair *positive–negative* used for referring to hedonic valence. According to the basic dictionary-coded senses, these terms do not form an antonymic pair, and different source domains may be retrieved for them: e.g., epistemic vs. speech act. The basic sense of *positive*, coded by all dictionaries consulted, is 'certain, ascertained, demonstrated'; the basic sense of *negative* is 'negated, refused'. Yet, people's intuitions about the meaning and semantic development of these words tell a different story. In an informal experiment, native speakers were asked to arrange various senses of these words from what they thought were older, more basic uses to newer ones.

[9] Although originally CMT approaches were not categorical on the format of conceptual representations underlying conceptual metaphor – allowing both propositional and imagistic implications – recent accounts claim a more direct relationship between linguistic expression and conceptual processing, perhaps mediated by simulation (Gibbs 2006, Ritchie 2008). Thus, they might but might not be compatible with what I have done. Meanwhile, it remains unclear how, once propositionally coded, these representations are translated into non-propositional formats: i.e., imagistic, embodied, amodal/supra-modal/multimodal, etc.

Respondents considered that the usage of 'positive' and 'negative' in domains such as mathematics, electricity, or temperature was primary and the generic sense of 'good', respectively 'bad' derived from the former.

It makes sense to expect that what is posited as a source domain needs to be active – or at least retrievable – to claim that the reason people employ a particular vocabulary specific to the source domain is motivated by the existence of metaphorical mappings. However, when source domains are not clearly available, it is difficult to interpret particular usages as testifying to metaphorical mappings based only on dictionary data. Meaning acquisition and ontogenetic enrichment of semantic structure need not reflect either historical semantic change or the order that senses are given in a dictionary. In consequence, *positive-negative* were always coded *D* for debatable.

A somewhat similar case is provided by the Romanian formulation *a nutri sentimente*: 'to nurture feelings'. Dictionary data suggests that the basic meaning of the verb *a nutri* is 'to feed, to eat', while 'to cultivate' is a derived figurative meaning in contexts where the object is an idea or feeling. At first glance, the formulation can be interpreted as a case of the metaphor EMOTIONS ARE LIVING BEINGS. The term *a nutri* preserves the sense of 'to feed' in expert communication within the biological and agricultural sciences and among speakers with broad linguistic expertise. For the majority of speakers though, this sense has become opaque – thus, a source domain is not retrievable for metaphorical mappings. A Google search supports this intuition: countless hits are retrieved in the affective domain and only one in the biological domain: *plantele s-au nutrit*: 'the plants have fed'.[10] Although, for a small number of speakers of Romanian, this example is plausibly classified as conventional metaphor; for the majority, the metaphor is dead.[11]

A possible 'reverse' case is provided by the Romanian adjective *profund* ('profound'), which – unlike its Italian (*profondo*) and Castilian (*profundo*) counterparts – is a recent French loan word. Lexicographic sources give the intellectual or affective domain as its basic scope and sense. For its Castilian and Italian counterparts, one might possibly retrieve a more basic domain in which the term is used; in Romanian, this is not the case. One might contend that the same basic domain can be retrieved via the synonymous adjective *adânc* ('deep'); however, despite their supposed synonymy – which is present in peoples' intuitions – the usage of the two adjectives seldom overlaps. Both appear to instantiate the same SCALE + CONTAINER complex schema, whose role in emotion concepts may not require metaphorical mediation. Pending further testing, these instances were also coded *D* for debatable.

In other cases – based on dictionary information alone – it is not possible to posit a source domain without resorting to theory-driven rationalization. One such case is the Romance-language adjective 'intense' – Romanian *intens*, Italian and Castilian *intenso* – to some degree used for referring to arousal as a characterizing dimension of the affective domain. Dictionaries may simply gloss this

[10] Verbal tense, modality, and voice were all varied in combination with a wide variety of phrases from biology.
[11] For a discussion of individual variation of degree of conventionality, see (Bowdle and Gentner 2005).

word as 'vivid' or generically indicate its scope as 'natural phenomena and human senses or feelings'. Etymological sources indicate that, in its first documentation in Romance languages – dating back to the Thirteenth Century – it was applied to the psychological domain. I have generally coded its various instantiations *D* for debatable.

On the other hand, when arousal is instantiated by the Romanian adjective *puternic* ('strong'; an indirect derivative of the verb *a putea*: 'can'), a source domain *is* potentially retrievable: that of human bodily strength, with emphasis on capability. A similar source domain may be retrievable for the Italian *forte*, Castilian *fuerte*, Swedish *stark*, Bokmål *sterk*, and Danish *stærk* – this time, however, with emphasis on physical resistance and endurance. The dictionary codes separately the sense having the domain of affective experience as its scope. Surprisingly for Romance languages, the earliest attested use of this adjective – Tenth Century – relates to feelings or sensations; while in Scandinavian languages, both senses – physical and psychological – are first documented more or less at the same time, in the Sixteenth Century. Alternatively, this could be analyzed as a case of exploiting IS – specifically that of the FORCE schema – but with a different profiling applied to bodily strength (antagonism/resistance) vs. affective domain (degree of force).

A similar analysis may be applied to another instantiation of the FORCE schema, this time in terms of affect control: instantiated in Romance languages by Latin-derived verbs meaning to 'control', for which it is difficult to retrieve a more specific source domain based on dictionary data alone. The first attested use of this sense – 'to control, to dominate' vs. the original sense 'to verify – is in the psychological domain: to control one's own body, feelings, or instincts voluntarily. In Scandinavian languages, it is instantiated by verbs meaning 'to steer, to control'. At first sight, an untendentious source domain seems to be available. Note, however, that 'to control, to dominate' is coded as a separate sense. The semantic change appears consistent with Mandler's view of IS and the neuroscientific evidence outlined above for spatial prepositions and motion and action verbs. In consequence, these verbs were also coded as debatable when used generically.

Finally, specialized nouns and verbs of experience other than 'feel' were also coded as debatable, pending further testing. These include the Italian *provare*: 'try out, experience'; the Romanian *a trai*, Swedish *uppleva*, Danish *opleve*, and Norwegian *oppleve*: all meaning 'live, experience'; and all nouns meaning 'state': Romanian *stare*, Italian *stato*, Castilian *estado*, Swedish *tillstånd*, and Danish and Bokmål *tilstand*. Rather than representing a transfer of knowledge or structure between domains, these verbs seem to testify to a narrowing of scope when applied to affective experience. In CMT, such nouns have commonly been interpreted as instantiating the CM STATES ARE LOCATIONS. Given that these nouns presently function as specialized nouns of experience, in would be interesting to test experimentally whether CMT's claims of conceptual processing can be confirmed, and whether the nouns can be treated uniformly across languages.

3.3.3 The Distribution of Codes

The distribution of codes indicates that metaphor (*M* or *D*) made up only a small part (8,2%) of the total words produced by respondents (Figure One). This compares well with the results reported by Beger for emotion concepts (see Section 1.2), as well as those reported by Steen and colleagues (2010) who, in their analysis of everyday conversation (47,000-word sample), found that only 7,7% of words conveyed metaphorical meaning in context. Checking for the presence of these codes across responses, *M* occurred in 21,9% and *D* in 33,4% of cases – indicating that, although many respondents resorted at least once to metaphor when consulting their emotion concepts, metaphor was hardly as dominant as assumed by the CMT studies reviewed in Section 1.2.

In general (see Figure Two), code distribution appeared to be uniform across languages or categories. One important exception was represented by both Italian superordinate categories: words coded *M* account for 8,7% and those coded *D* account for 12,9% of all words produced in response to ITS.[12] Similarly, words coded *D* account for 9,6% of all words produced for ITE. Of the 37 occurrences of *D* in the ITS data, about a third (thirteen cases) are accounted for – in different inflexional forms – by the verb of experience *provare*, eight by the noun of experience *stato*, five by the valence adjective *positivo*, and seven by the arousal adjective *forte*. Of the 42 occurrences of *D* in the ITE data, about a fifth (eight cases) are accounted by *provare*, another fifth by *stato*, three by *positivo*, and five by *forte*.

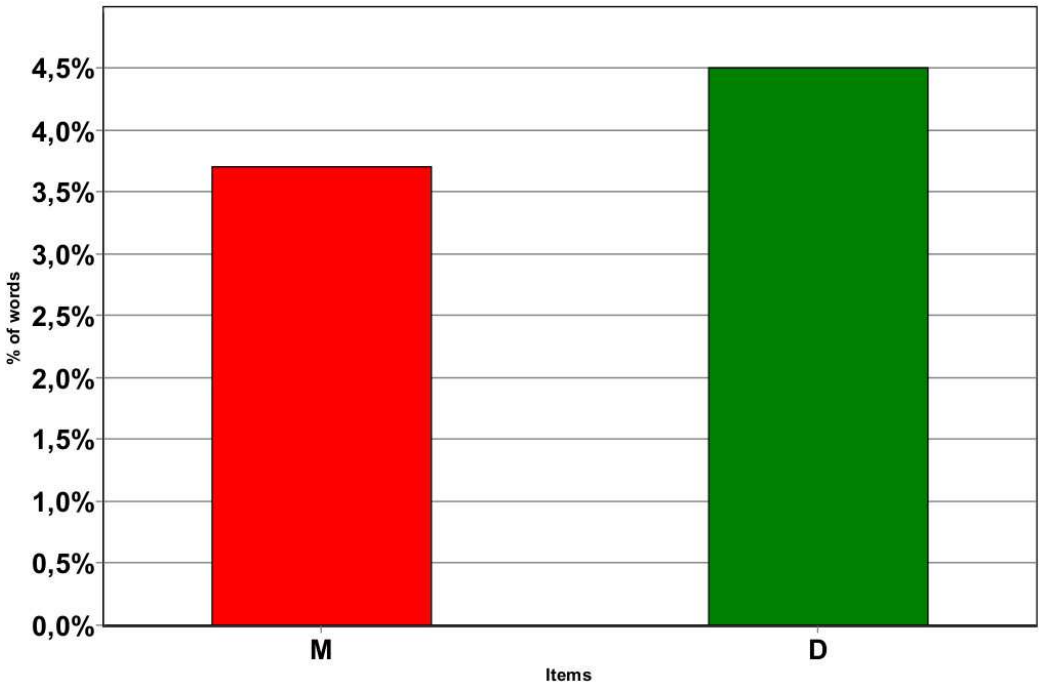
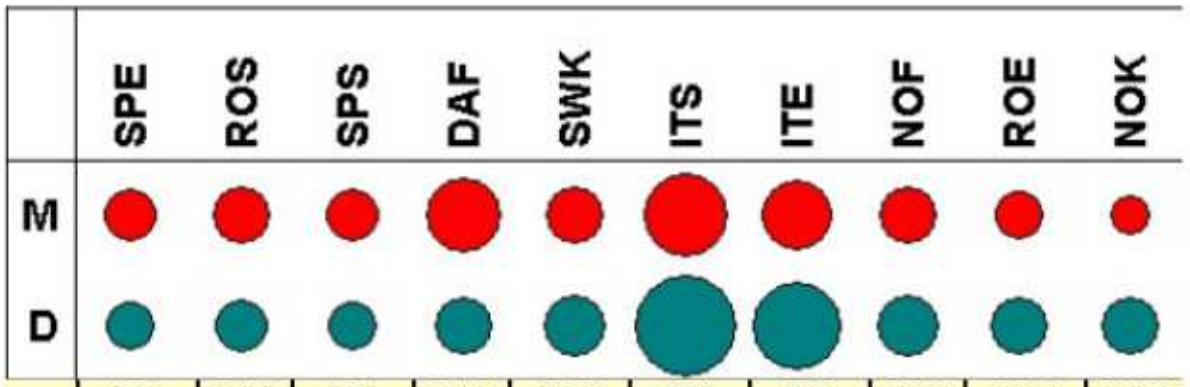


Figure 1: Distribution of *M* and *D* as % of words.

[12] See Table One for the category codes.



	SPE	ROS	SPS	DAF	SWK	ITS	ITE	NOF	ROE	NOK
M	3,3%	4,3%	3,3%	7,2%	4,2%	8,7%	5,9%	4,1%	3,1%	1,9%
D	3,0%	3,6%	3,2%	4,2%	4,4%	12,9%	9,6%	4,9%	4,0%	4,0%

Figure 2: *M* and *D* distribution across languages and categories as % of words.

According to CMT, the non-metaphorical structure of emotion concepts is skeletal, so there is little one can say about emotion without resorting to metaphor.[13] It was interesting to check whether or not aspects of emotion knowledge were indeed more likely to be conceptualized metaphorically.

This was done using a code co-occurrence analysis: the main codes (coding for metaphor) against the secondary codes (Table Two). For this purpose, a contrast main code was added: partonomy (*P*), coding for the accessing strategy that – according to the analysis reported in Section 3.2 – appeared to occur most frequently in the responses. Similarity indices were computed using Ochiai's coefficient, followed by a hierarchical cluster analysis, and a multidimensional scaling analysis for assessing the strength of the co-occurrence relationships. The strongest relationship to emerge was between partonomic access and references to cognitive correlates of emotion – e.g., intrusive thinking, memories, decision-making, etc. – followed by the co-occurrence of *D* with references to subjective feeling, including the use of verbs and nouns of experience, as well as hedonic valence. These are followed, in order, by relations between *P-AF*, *P-Bh*, *P-SF*, *D-Cog*, *P-FZ*, and *D-DA* (for codes, see Table Two). The first relationship to involve *M* comes far down the list, linking *M* with *SF*, followed by *M* with *IMP*, *Cog*, *CR*, *Loc*, and *DYN*. Of all the relationships between *M* and secondary codes, *IMP* – coding for cultural and personal meaning – appears the strongest and the only one, apart *M-CogR*, where a relationship is primarily established with *M* rather than *D* or *P*. Similarity indices (Table 3), which express the strength of these relationships, indicate that metaphor is not prevalent with any of the knowledge types covered by the responses, with the exception of *IMP*. If further experiments provide evidence of conceptual metaphorical processing of the data coded *D*, then subjective feeling and degree of arousal might indeed be further knowledge types associated with metaphorical conceptualization – consistent with the findings in (Fainsilber & Ortony 1987).

[13] See the claims reviewed in sections 1.1 and 1.2.

	ACT	AF	BH	COG	CR	D	DA	DYN	FZ	IMP	LOC	M	P	SF
ACT	1													
AF	0,064	1												
BH	0,008	0,012	1											
COG	0,058	0,004	0,039	1										
CR	0	0	0,008	0,01	1									
D	0,095	**0,172**	**0,111**	**0,224**	**0,169**	1								
DA	0	0,024	0	0	0	**0,317**	1							
DYN	0	0,031	0,009	0,018	0,032	**0,158**	0	1						
FZ	0,01	0,021	0	0,016	0,009	0,078	0,035	0	1					
IMP	0	0	0	0,011	0	0,078	0	0,011	0	1				
LOC	0,009	0,007	0,015	0	0,009	**0,229**	0,021	**0,115**	0,066	0,009	1			
M	0,028	**0,157**	0,069	**0,15**	**0,172**	0,038	0,075	**0,146**	0,061	**0,217**	**0,14**	1		
P	**0,253**	**0,37**	**0,339**	**0,54**	**0,126**	**0,298**	0,025	**0,106**	**0,309**	0,054	**0,103**	**0,13**	1	
SF	0,044	0,027	0,012	0,043	0,037	**0,442**	0,05	0,032	0,034	0,029	**0,185**	**0,181**	**0,241**	1
	Legenda		**M**	**D**	**P**									

Table 3: Strength of co-occurrence: Main codes and types of emotion knowledge.

4. CONCLUDING REMARKS

The structuring role of CM in emotion concepts was assessed by qualitatively and quantitatively analyzing 475 responses obtained in a reasoning task that supplemented a free-listing task. Ten comparable sets of data were collected in six languages using the eliciting categories *følelse* and *kjensle* (Bokmål), *følelse* (Danish), *känsla* (Swedish), *emoción* and *sentimiento* (Castilian), *emozione* and *sentimento* (Italian), and *emoţie* and *sentiment* (Romanian). CM was found to account for only 3.7% of the collected data. A further 4.5% of the data was coded as debatably metaphorical, using the criteria outlined in Section 3.3.2. Since CMT claims that emotion concepts have only a skeletal non-metaphorical conceptual structure – meaning that one can say little about emotions without resorting to metaphor (see sections 1.1 and 1.2) – it was interesting to test whether particular kinds of emotion knowledge are, indeed, more readily conceptualized metaphorically.

A number of secondary codes were derived based on the qualitative analysis reported in Section 3.2, to code for kinds of emotion knowledge. A code co-occurrence analysis – based on Ochiai's similarity indices, hierarchical clustering analysis, and multidimensional scaling analysis – was carried out to assess the strength of correspondence between the occurrence of metaphor and various kinds of affective knowledge. The results failed to find any strong correspondences, with the exception of references to personal or cultural meaning and, to a lesser extent, references to affect control – consistent with the interpretation that metaphor is not necessary for constituting any aspect of emotion concepts, as claimed by CMT. Metaphor appears instead to enrich existing non-metaphorical structure. Perhaps the use of metaphor is best accounted for by considering factors such as context and goals (Beger 2008, 2009, 2011) as well as needs for communicative expressiveness: the higher the need, the

greater the amount of expected embodied simulation as basis for eliciting an empathic response in the audience.[14]

Beyond the clear-cut cases of CM, 4,5% of the words produced in Task 1.3 were interpreted as potentially instantiating CMs. Based on the data – corroborated by secondary data of the kind described in Section 3.3.2 – it is not possible to make any strong conceptual processing claims. However, by examining the data in light of both the CMT and non-CMT literature and the evidence they put forward, it is possible to collect a database of stimuli to be employed in targeted, hypothesis-driven studies to better assess the plausibility of interpreting these stimuli in terms of metaphorical conceptual processing. If claims of conceptual processing are confirmed then, based on the data reported here, subjective feeling and arousal may emerge as affective knowledge types that are largely structured by metaphor. The present study was an attempt to confront both CMT-based and alternative interpretations of the same data; but also an attempt to explore a possible integration of CMT-based and alternative approaches to emotion concepts, faithful to the assumption that each can benefit from the other.

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[14] For a study of metaphors of pain, see e.g. (Semino 2010).

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Ways of Perceiving, Moving, and Thinking: Re-vindicating Culture in Conceptual Metaphor Research

Metaphor in cognitive linguistics is understood as a mapping where properties from one domain – the source – are transferred onto another domain: the target. The conceptual associations between source and target have usually been considered universal, unidirectional, and usage-based. One of the issues generally taken for granted, yet often underexplored, is the critical role of the notion of *culture* when characterizing conceptual metaphor. In this paper, we revisit and problematize the concepts of universality, uni-directionality, and usage-basedness and argue in favour of a broader-scoped approach to metaphor that brings in the notion of culture as key to metaphor research. By 'culture', we mean two, related things: (a) shared beliefs, knowledge, and world view(s) characterizing national, ethnic, and speech communities; and (b) the discourse communities using metaphor: i.e., those subcultures within broader cultural frames that are characterized by specific knowledge schemas, needs, and interests. To do so, we look into metaphors used by non–Western cultures and the architectural community when expressing the ways they perceive and think about their worlds.

Keywords: culture sieve, perception, motion, genre, metaphor, COGNITION IS PERCEPTION**.**

1. INTRODUCTION

Conceptual metaphor in cognitive linguistics (henceforth, CMT) is understood as a mapping between two conceptual domains, where properties from one domain – the source – are transferred onto another domain: the target. The conceptual associations between source and target have usually been considered universal: grounded on an experiential bodily basis shared by all human beings; and unidirectional: the – usually abstract – target domain is understood by means of information mapped from the – usually physical or more concrete – source domain but not vice versa. In other words, the brunt of the metaphorical construal of the target domain is born by the source domain. Cognitive linguistics is to be included in what are known as usage-based approaches to language given the emphasis placed on exploring and discussing real instances of verbal interaction: i.e., the well-known linguistic notion of performance; rather than on combinatory, syntactic abilities: i.e., competence, as illustrated in hypothetical, well-formed sentences.

Two other key notions in the paradigm are motivation and embodiment, both used to explain how human cognition works - metaphor included. According to Johnson, '…meaning and value are

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grounded in the nature of our bodies and brains, as they develop through ongoing interactions with various environments that have physical, social, and cultural dimensions. The nature of our embodied experience motivates and constrains how things are meaningful to us' (Johnson 1997: 154).

As Johnson points out, while physical configuration is indeed paramount to embodiment, it relies on culture as well.[1] Sinha and Jensen de López offer a similar view, warning that, in defining embodiment, people have 'failed to pay sufficient attention to the importance of culture and society in human cognition, in the motivation of linguistic structure, and in the acquisition of language' (Sinha & Jensen de López 2000: 20; see also Ibarretxe-Antuñano 2008, 2013).

In short, although the relationship between culture and conceptual metaphor has recently received more attention from some cognitive linguistics scholars (see e.g. Kövecses 2005, Sharifian *et al*. 2008, Yu 2009), the critical role of culture in characterizing conceptual metaphor remains under-explored. Consider this definition of embodiment from Evans' (2007: 68) A Glossary of Cognitive Linguistics:

> Embodiment. Pertains to the body, especially species-specific physiology and anatomy. Physiology has to do with biological morphology, which is to say body parts and organisation, such as having hands, arms and (bare) skin rather than wings and feathers. Anatomy has to with internal organisation of the body. This includes the neural architecture of an organism, which is to say the brain and the nervous system. The notion of embodiment plays an important role in many cognitive linguistic theories.

This paper sees culture as encompassing two, related notions. On the one hand, it refers to the shared beliefs, knowledge, and world view(s) characterizing broad national, ethnic, or speech communities; on the other, it refers to the communities – or sub-cultures – sharing knowledge schemas, needs, interests, and language, as subsumed within the forementioned broad cultural frame – or Culture with a capital C.

The importance of taking culture into account in metaphor research is illustrated by such a conventional metaphor in the West as UNDERSTANDING/KNOWING IS SEEING, whereby an adjective like *blind* or a verb like *see* is used to express '(not) understanding': e.g., *how could you have been so blind and not seen what your son was up to?* However, as Evans and Wilkins (2000) describe, in Australian aboriginal cultures and languages, the notion of understanding is expressed via the sense of hearing: i.e., the metaphor UNDERSTANDING/KNOWING IS HEARING. In other words, different Cultures convey the same reality by drawing on different metaphorical sources. Matters get even more complicated when one moves beyond everyday communication to focus on specific communities within a Culture: e.g., architects, who share a professional practice and concomitant worldview and language, use blind as an adjective to describe a structure without windows: i.e., without openings to the 'outside' world.

These examples point to the controversial quality of universality, uni-directionality, and usage-basedness as they stand in mainstream CMT. A look at discourses and communities suggests that (a)

[1] Embodiment in Cognitive Linguistics is interpreted in several ways (Geeraerts & Grondelaers 1995; Rohrer 2001). In this paper, we follow Johnson's (1987) definition of embodiment.

metaphors depend, to large extent, on interaction with the world mediated through culture: e.g., the use of different perception sources to articulate the targets of cognition targets; (b) metaphorical mappings need not involve abstract targets, as illustrated by architectural metaphors using visual metaphor to map physical sources onto physical targets, as in the expression *blind building*; and (c) the term 'usage-based' is often interpreted narrowly: most CMT research is still lexis- or sentence-based.

In this paper, we argue in favour of a broader-scoped approach to metaphor where the forementioned tenets are refined and validated, incorporating the two notions of culture described above. To do so, we explore the semantic fields of perception and motion as they appear in different Cultures and cultures. The reason for choosing these two conceptual domains is that they have received a great deal of attention in mainstream cognitive linguistics (see e.g. Talmy 2000, Sweetser 1990).

In the next section, we overview the problems derived from the CMT issues introduced above. We then use our discussion of real corpus data to underline the importance in metaphor research of paying attention to culture. Finally, we attempt to integrate the notions of Culture and culture in metaphor research.

2. REVISITING ISSUES FROM CMT

CMT set out to explain thoroughly the figurative workings of mind, picking up on longstanding philosophical concerns over the imaginative and anthropomorphic basis of *logos*: i.e., of human thought and language. CMT questioned basic postulates in other well-known theories of metaphor such as **'**interaction' and 'comparison' (see the papers in Ortony 1993). The cognitive approach starts by assuming the creative potential of metaphor**,** defining metaphor as 'understanding and experiencing one kind of thing in terms of another' (Lakoff & Johnson 1980: 5). It follows that such 'understanding and experiencing' is intrinsically new: i.e., reality is created in the metaphorical process. A second important postulate is the conventional status of metaphor in human thought and communication – even though conventional metaphors may, of course, be further exploited in more innovative or markedly figurative ways. One of CMT's strong points is precisely that it has shown the systematicity of metaphor in human thinking. Third, metaphor is described as a cognitive mechanism determined and motivated by interaction in the world: i.e., constrained by one's particular body and mind configuration as described by the notion of embodiment. Embodiment is shared (presumably) by all human beings: it is universal. Fourth, from the outset, CMT has rested on the basic premise that metaphor and culture are intimately related. A good case in point is the notion of *Idealized Cognitive Models* or *folk models* developed in (Lakoff 1987). Finally, CMT scholars strive to differentiate metaphor as a cognitive mechanism from metaphorical language: i.e., the instantiation of conceptual metaphor (Kövecses 2002), where 'language' concerns not only oral and written data but visual data as well: e.g., gesture (Cienki & Müller 2008).

Although the CMT paradigm represented a breakthrough in metaphor research in the 1980s, some of its postulates have lately been criticized or revisited. One of the main criticisms is that most of the evidence used to prove that metaphor is a systematic conceptual mechanism is based on language: usually de-contextualized language, in the broad sense. This criticism has several angles worth exploring in more detail, one of which is the alleged circularity of reasoning in CMT research. As Valenzuela (2009: 237) puts it: 'a common methodology in metaphor theory has been to group together a given number of linguistic expressions, which are found to share certain common characteristics, and then use these expressions to propose a given conceptual metaphor; this conceptual metaphor is in turn used to explain why there is such a numerous group of these linguistic expressions'.

Of course, the importance of non-linguistic data to supporting the conceptual nature of metaphor is not new in cognitive linguistics (see e.g. Gibbs 1994). At the same time, only recently has the presence of metaphor in human thought been explored via experiments (see e.g. Boroditsky 2000; Casasanto & Dijkstra 2010; Casasanto & Boroditsky 2008; Gibbs *et al*. 1997; Gibbs & Matlock 2008; Santiago, Lupiáñez, Pérez & Funes 2007).

The growing body of psycholinguistics research can be extremely useful in refining CMT. Psycholinguists have shown that some conceptual metaphors are grounded in bodily experience. A battery of experiments carried out in the domain of emotions offers empirical data consistent with the cognitive entrenchment of such well-known metaphors as HAPPINESS IS UP/SADNESS IS DOWN. Casasanto and Dijkstra (2010) have recently shown that positive life experiences are associated with UPWARD MOTION and that negative ones are associated with DOWNWARD MOTION. Some of these experiments have revealed conceptual metaphors to be based not solely based on bodily experience but also on linguistic and cultural conventions: e.g., Santiago and colleagues (2007) demonstrate that, in TIME IS SPACE, TIME is mapped not only on up-down and front-back spatial axes but also on a left-right horizontal axis, where the future is located to the right or left depending on the direction of reading and writing. This supports our main claim in this paper: namely, that C(c)ulture plays a crucial role in metaphor – or, as Palmer and Sharifian claim, 'embodied categories are framed by cultural knowledge and practice' (Palmer & Sharifian 2007: 2).

Meanwhile, the growing body of cross-linguistic research in CMT has shown that, although some conceptual metaphors are similarly instantiated across languages, they are far from universal and must be interpreted within a specific cultural frame. This research avoids the 'linguacentrism' that lingers in some cognitive linguistic analyses (see Palmer 2003). We further elaborate this in Section 3.1, where we discuss perception metaphors.

Another point of contention is the lexis- or sentence-basedness of most CMT research, i.e. the lack of research on the pragmatics of metaphor in discourse contexts where it helps articulate topics and manage the author-reader interactions (Zinken, Hellsten & Nerlich 2008; Lakoff 2004). The strong cognitive bias of mainstream CMT has been questioned implicitly or explicitly by more applied or

discourse-oriented metaphor scholars (Caballero 2003, 2006, 2007; Cameron & Deignan 2006; Kimmel 2010; Steen 2007). Although starting from linguistic evidence, the description and classification of figurative phenomena are still done at a cognitive level, top-down: i.e., the focus is on deep-level cognitive mappings irrespective of the diverse ways they may be instantiated. As Goatly puts it (1997: 42), 'cognitive metaphors have to find expression in some medium, and when the medium is language the form of the expression will have important consequences for their recognition and interpretation'.

Playing down the diverse ways in which metaphor is realized is risky for a number of reasons. First, it helps preserve one of the most debatable aspects of the theory: i.e., the close link between figurative language and conceptual mappings in the brain. Second, it disregards the role language (i.e., discourse interaction) may play in metaphor entrenchment and, hence, in metaphor 'health' and evolution. MacArthur (2005) argues that the shared understanding of notions of control among speakers of Spanish and English -- the surface manifestation of which is seen in metaphors related to horse riding – arises not from embodiment or direct experience but as a consequence of language use. In similar fashion, Caballero (2012) describes how several metaphors are enriched, re-elaborated, and conventionalized within the tennis community through repeated use. Given the cultural status of language, this implies viewing the relationship between metaphor and culture as unidirectional rather than bidirectional.

The position we adopt in this paper is not radically at odds with CMT. We start from one basic assumption: claiming that human reasoning is largely metaphorical requires exploring both the role of metaphor in cognition and how people use metaphor to communicate. Metaphor is both a conceptual and a socialization tool: one that is partly acquired and put to work through discourse interaction. One needs to incorporate cognitive, linguistic, and cultural aspects of figurative phenomena in research aimed at explaining how and why people interact through metaphor. One must combine a cognitive with a discourse perspective on metaphor if one hopes to gain reliable insights. Of course, a discourse approach is not exempt from problems, either. Three related hot topics in contemporary metaphor research concern the data used: both the identification of metaphor from the data and the interpretation of metaphorical instances.

The use of corpora – both large and more *ad hoc*, community-specific corpora – has become standard in recent research (e.g., Cameron 2003; Charteris-Black 2004; Caballero 2006, 2007; Deignan 2005; Semino 2005; Stefanowitsch & Gries 2006). The use of corpora ensures that (a) research deals with real language use; (b) sufficient data can be scrutinized; and, most importantly, (c) the phenomenon under analysis is no mere accident but is recurrently used by identifiable communities. Corpus-based approaches strive to explore metaphor from a scientific, real-use perspective. Their main goal is to identify metaphors from their linguistic instantiation in corpora while examining the role of these metaphors in building the ontology of more broadly or narrowly

defined communities. Note that, while this is an important and, indeed, necessary development, most studies remain very much lexically rooted: their analysis does not go beyond the sentence level.

The conventional/creative metaphor distinction typically derived from these studies remains very much in agreement with traditional CMT. Unconventional metaphorical language not only shows how members of certain communities exploit conventional shared metaphor (Caballero 2012) but may also provide an alternate view on unquestioned tenets of CMT. Abstract or metaphorical motion is a case in point. Customarily, it has been explored in general discourse: usually narrative; yet, when one moves to more specific contexts, the phenomenon renders a much interesting – if occasionally disturbing – picture, as we discuss in Section 3.2.

Metaphor identification is problematic, giving rise to recent attempts to build an objective, scientific procedure for it (Pragglejaz Group 2007, Steen 2007, Steen *et al.* 2010). The discussion proceeds in two directions. First, in determining whether a given use of language is metaphorical or not, the identification procedure returns to the creative/conventional opposition; see the discussion on 'deliberate' metaphors in (Steen 2008, Steen *et al.* 2010) and on 'emergent' metaphors in (Cameron & Deignan 2006).[2] Second, it strives to determine an optimal or operative unit of analysis (Pragglejaz Group 2007, Steen *et al.* 2010).

Despite the insights gleaned, metaphor identification remains an issue in all these approaches. Before taking this point further, we offer two examples from architectural texts:

(1) *A pair of curved glazed wings extend to embrace the neighbourhood* [CPPARIS.TXT].

(2) *The square could scarcely be left open and unprotected, but Wilson had to argue hard to be allowed to project the south-east wing forward* [SPEAKI~1.TXT].

As Caballero (2006) describes, these two examples were shown to four architects, who were asked whether they thought the term *wings* in (1) meant the same as *wing* in (2). All acknowledged the figurative and visual quality of the description in (1), yet did not comment upon *wing* in (2). In other words, although both examples instantiate the same metaphor, using the resemblance of spatial volumes to actual wings, the architects regarded *wings* in (1) as metaphorical but *wing* in (2) as a conventional reference to a spatial volume. They further related the image suggested by *wings* in (1) with the imagistic verb *embrace*. None was able to explain why (1) felt more metaphorical than (2).

This brief digression may be used to address the three forementioned issues in contemporary metaphor research. The architects' reaction shows that the metaphorical status of an expression may result from the disparity of the experiential domains involved and not only the way it appears in a particular text. Incongruity and salience are quite different issues when identifying metaphorical language in texts. Conventional – hence, usually inconspicuous – metaphorical language can be re-elaborated or exploited rhetorically, which makes it feel more saliently figurative. Accordingly, although idiosyncrasies of the knowledge projection involved in diverse metaphorical mappings may

[2] Emergent metaphor is addressed from a different perspective in (Ricoeur 1978) and (Wilson & Carston 2006).

be discussed in terms of concepts, the formal and contextual aspects intrinsic to their actual instantiation need to be considered if one wants to gain insight into metaphor. As Deignan (2005) suggests, word-by-word identification and analysis is not only time-consuming, it may sometimes be wasteful. The figurative quality of *wings* in (1) versus the non-figurative quality of *wing* in (2) may best be made clear by considering the sentences in context rather than analyzing them according to their constituents. Finally, metaphoricity may be seen as a matter of degree: not all metaphorical language is regarded as such by all people, underlining the role of context and social convention in metaphor awareness and identification: hence, the importance of taking culture into account to explore metaphor in all its complexity.

3. INTEGRATING THE NOTION OF CULTURE IN METAPHOR RESEARCH: PERCEPTION AND MOTION IN LANGUAGE AND CULTURE

As pointed out in the introduction, culture covers two related notions, what we have called Culture and culture (those cultures articulating Culture). Taking both notions into account is essential to metaphor research for practical and theoretical reasons. In the first place, it may help identify the metaphors underlying the worldview and language of cultures within a broader Cultural frame as well as explore how they become conventionalized (entrenched), expanded, and enriched by the members of a community. If one bears in mind that discourse communities are characterized by distinctive knowledge schemas, needs, and interests, one may reasonably expect that the ways metaphor is understood will differ radically across communities.

Looking into how metaphor is used by various cultures may shed light into how the production and interpretation of metaphor are affected by the specificity of the community using it. In what follows, we follow this line of argument, illustrating it with examples from two conceptual domains: perception and motion. Our goal is to show that the conceptual grounding of metaphor needs to be validated by the C/culture sieve: i.e., that which mediates between the corporeal and sociocultural dimensions of embodiment. This sieve plays an instrumental role in the way physical, sensorimotor-grounding universal experiences pass through the complex and socially acquired beliefs, knowledge, and worldwiew(s) intrinsic to one or several communities: i.e., C/cultures. As Gibbs puts it (2006: 9): ‘people’s subjective, felt experiences or their bodies in action provide part of the fundamental grounding for language and thought. Cognition is what occurs when the body engages the physical, cultural world and must be studied in terms of the dynamical interactions between people and the environment’. If, as Silverstein (2004) claims, culture is articulated and made manifest through patterned (‘genred’), interactive negotiation of meanings and values, then using a genre-based approach may provide useful insight into the cultural roots of metaphor.

3.1 Perception metaphors in language and Culture(s)

The senses may be described as the channels through which people gather up-to-date information about the world (Barlow & Mollon 1982; Blake & Sekuler 2005; Classen 1993, 1997; Goldstein 2009; HHMI 1995; Howes 2004; Rouby *et al.* 2002). The role of the senses as information channels impinges upon language. Many sense-related words show how the senses are used to conceptualize such domains as understanding, obedience, (dis)pleasure, and so on. Perception metaphors have been discussed in cognitive linguistics since the pioneering work of Sweetser (1990), who showed the systematic relations between perception through the senses – especially, the so-called 'major' modalities or 'far senses' such as vision and hearing – and the internal self and sensations. Other scholars have since shown that the 'minor' senses of smell, touch, and taste are likewise richer than expected in terms of metaphorical mappings (Ibarretxe-Antuñano 1999a/b, 2002, 2006; Viberg 1983, 1984, 2001).

Most of this early work focuses on perception metaphors allegedly shared by speakers from different languages. The reason why researchers focused on 'universal' metaphors is clear. Their main goal was to show that these metaphors are embodied: i.e., grounded in daily experience. UNDERSTANDING/KNOWING IS SEEING is a thoroughly discussed conceptual metaphor in this respect. It is instantiated by expressions such as *clear argument*, *I see your point*, or *opaque discussion* and generally considered a good example of a universally-motivated mapping between two conceptual domains. According to Sweetser (1990: 45), vision is the primary modality from which verbs of higher cognitive activity – e.g., 'knowing', 'understanding', and 'thinking' – are recruited. Her views are shared by psychologists and psycholinguists such as Gardner (1983) and Arnheim (1969), who also consider vision the most important sense, claiming that the association between vision and cognition is a natural one. The perceptual experience one undergoes when one uses vision, and its immediate results of quick, direct, and trustworthy information, may explain why this sense in particular is linked to 'understanding' – in contrast to other sense modalities such as smell, which is linked to 'guessing', 'suspecting', and 'sensing' instead, as illustrated by examples (3) and (4) respectively.

(3) *In Ferrari terms, it wasn't, and Niki should have smelled earlier that yet another Ferrari plot was under way, and without Montezemolo, his flanks were unprotected* [BNC, 15/11/2010].[3]

(4) *"It is difficult to see how the integrity of the statement can be assured or enforced", it added* [BNC, 15/11/2010].

3 Examples in this section are all drawn from one of three corpora: for English, the *British National Corpus* (BNC, http://www.natcorp.ox.ac.uk/); for Basque, the *Ereduzko prosa gaur –Contemporary Reference Prose* (CRP, http://www.ehu.es/euskara-orria/euskara/ereduzkoa/); and for Spanish, the *Corpus de Referencia Actual del Español-Corpus for Contemporary Spanish* (CREA, http://corpus.rae.es/creanet.html).

Vision allows one to detect and identify objects immediately and accurately. Using smell, one can detect odors easily, but identifying them is more difficult (Engen 1991): what perception psychologists know as the 'tip of the nose' phenomenon (Lawless & Engen 1977). When one perceives via these senses, one formulates hypotheses about the nature of the objects one perceives that correspond – more or less accurately – to the nature of the real object. The information gathered by vision and the hypotheses formulated on the basis of that information are more reliable than those garnered from smell. The prototypical properties of vision[4] explain not only the different meanings of (3) and (4) but also the different values of parts of speech such as *perception evidentials*, among whom visual evidentials provide the highest degree of reliability (Aikhenvald & Dixon 1998, 2003; Barnes 1984; De Haan 2005; Perrot 1996; Willett 1988).

If the idea of embodiment is correct, then one can argue that all human beings perceive and experience vision in the same way, since all have the same physiological and psychological apparatus for visual perception. This is why commonalities in embodied experience relate to similarities in sense perception for conceptual metaphors across languages. The link between vision and intellect is pervasive not only in languages such as English (Alm-Arvius 1993, Baker 1999, Danesi 1990) but also in other Indo-European and non-Indo-European languages (Ibarretxe-Antuñano 1999a, 2002; Viberg 2008). In Basque and Spanish, one finds examples similar to the ones above:

(5) *Orain, berriz, urtetik urtera garbiago ikusten dut zein bestelakoa den Francoren proiektua Proustenaren aldean* [CRP, 15/11/2010] ('now, on the other hand, years passing, I see it more clearly how different Franco's project is in comparison to Proust's').

(6) *Ni nos aclaró usted antes lo de la edad, ni veo por qué habla de odiar al hijo y asesinar al padre* [CREA, 15/11/2010] ('neither did you explain to us the age issue nor do I see why you talk about hating the son and murdering the father').

(7) *Hura esatean egin zuen irri makurragatik, usaindu nuen esaldiak gaiztakeriaren bat ezkutatzen zuela, baina ez nuen harrapatu* [CRP, 15/11/2010] ('when he said that, due to his mischievous smile, I could smell that his sentence hid some evil, but I didn't catch it').

(8) *No me gustaba el tema de aquella noche, no me había gustado nunca, recordé, me olía mal desde el principio, presentía algo que no me iba a gustar, pero ya no podía volver atrás* [CREA, 15/11/2010] ('I didn't like the topic that night; I've never liked it; I remembered it smelled bad to me from the beginning. I could sense something that I wasn't going to like, but I couldn't go back').

Two questions arise: whether the metaphor UNDERSTANDING / KNOWING IS SEEING is really as universal as has been argued in the literature, and whether culture plays any role as a filter for bodily based metaphors.

[4] See Ibarretxe-Antuñano (1999a) for more about the conceptual bases of perception metaphors.

Research in non-Western languages quite strongly demonstrates that the metaphor is *not* universal. Evans and Wilkins (2000) describe over 60 Australian languages where the link between the domain of intellect and cognition is established via hearing rather than vision – the latter linked instead to desire, sexual attraction, supervision, and aggression. Expressions in Walmajarri such as *pinajarti* ('intelligent'; literally, 'having an ear') and *pina-pina karrinyu* ('think'; literally, 'ear-ear-stand') and verbs such as *awe* in Arrernte, *gannga-* in Banjalang, *yangkura* in Ngar, and *kulini* in Pitjantjatjara – all with the meaning 'hear, listen, and understand' – illustrate the UNDERSTANDING / KNOWING IS HEARING metaphor.

Australian languages are not the exception that proves the rule: similar mappings are found in other languages. Devereux (1991) reports that the Sedang Moi in Indochina conceptualize the ear as the seat of reason. Expressions such as *tlek* ('deaf') and *oh ta ay tue(n)* (literally 'has no ear') are used to describe people who lack intelligence. Mayer (1982) likewise reports that in Ommura, Papua New Guinea, all intellectual processes are associated with the auditory system. Everything concerning motives, thoughts, and intentions is 'in the ear'; verbs such as *iero* mean both 'to hear (a sound)' and 'to know, to understand'. Seeger (1975) reports that the Suya Indians of Brazil use the same verb *ku-mba* for 'listen', 'understand', and 'know'. 'When the Suya have learned something – even something visual such as a weaving pattern – they say, "it is in my ear"' (Seeger 1975: 214). The Desana of the equatorial rain forest of Colombian Northwest Amazon (Reichel-Dolmatoff 1981) consider hearing the most important function of the brain: it is the sense that connects the brain hemispheres (*pee yíri*: 'to hear, to act') and provides abstract thought.

Hearing is not the only alternative to vision: there are other possibilities. The Tzotzil of Mexico consider heat (hence, touch) to be the basic force of the cosmos (Classen 1993). The Ongee of the South Pacific Andaman Islands order their lives by smells (Classen, Howes & Synnott 1994; Pandya 1993), as do the Jahai in the Malay Peninsula (Burenhult & Majid 2011).

Cultures exist where several perceptual modalities work together in conceptualizing cognition. The Shipibo-Conibo Indians of Peru are reported (Gebhart-Sayer 1985) to combine visual, auditory, and olfactory perceptions to form a body of shamanic cognition.

What these examples show is not only that UNDERSTANDING / KNOWING IS SEEING is far from universal but also, as pointed out by several anthropologists (e.g., Howes 1991, 2003, 2004; Ong 1991; Tyler 1984), the omnipresent Western perspective somehow 'pollutes' conceptual reality in the perception domain. In sum, vision plays a salient role in our conceptualization of the intellect, but this salience is neither shared by all cultures nor present in older stages of Indo-European culture. Tyler (1984:23) writes: 'the hegemony of the visual… is not universal, for it: (a) has a history as a commonsense concept in Indo-European, influenced particularly by literacy; (b) is not 'substantiated' in the conceptual 'structures' of other languages; and (c) is based on a profound misunderstanding of the evolution and functioning of the human sensorium'.

Together, the forementioned linguistic and anthropological research has important consequences for the analysis of perception-based conceptual metaphor. The motivation for and grounding of these semantic extensions cannot be explained solely by means of a common body basis: culture is also a key factor in human thought. As Ong (1991: 26) points out, 'cultures vary greatly in their exploitation of the various senses and in the way in which they related their conceptual apparatus to the various senses'.

One solution is to argue in favour of a more general and abstract metaphor COGNITION IS PERCEPTION – then, after sifting the metaphor through the filter of a given culture, specify which of the sense modalities provides its specific instantiations (Ibarretxe-Antuñano 2008). Every language – English, Jahai, Ommura, Walmajarri, etc. – seems to possess COGNITION IS PERCEPTION. Depending on the particular cultural background of the language, the metaphor is instantiated in a concrete metaphor: COGNITION IS SEEING for English, COGNITION IS SMELLING for Jahai, and COGNITION IS HEARING for Ommura and Walmajarri. In a way, this flexible grounding is still based on a common body basis: it assumes that the physiology and psychology of the senses motivate the pervasive link between cognition and perception. At the same time, it adds the necessary role of culture. This approach accords with what Kövecses (2005, 2008) describes as the differential experiential focus: i.e., the way cultures single out different aspects of embodiment. This is what we described above as the *culture sieve*. It may help determine what Majid and Levinson (2011) call *sensescapes*: each culture's rich sensorial landscapes enabling one to 'detect domains where one culture sings and another is silent' (Majid and Levinson 2011: 16). It demonstrates that the conceptual grounding of metaphor really is based both on the body (i.e., sensorimotor experience) and culture.

One need not resort to remote non-Western cultures to show that metaphors – no matter how 'successful' they may be in a language – need to pass the culture sieve to be understood correctly. This culture sieve may be understood in two, complementary ways. On the one hand, one should ask how pervasive and salient the link between vision and intellect is in languages where the metaphor is found: the metaphor UNDERSTANDING / KNOWING IS SEEING may exist in a language/culture but not be the only sense perception related to understanding, nor be the most used expression for this domain. For example, although (5) shows that Basque employs the metaphor, when somebody wants to say that a person knows a lot / is wise / is an expert, the expression used is *aditua* ('hear/listen.past participle.determiner'): i.e., the sense domain is hearing, not vision. Spanish is another example. The verb *ver* ('see') is also related to the intellect, but the sense-related verb that Spanish speakers use for knowing is *saber* (from the Latin *sapere*: 'to taste'). Viberg (2008) argues that, although vision is related to understanding in Swedish, the relation is not so pervasive as in English. He compares English sentences with their translations into Swedish and concludes (2008: 138-139) that 'English *see* is relatively frequently translated… with Swedish verbs referring to understanding rather than visual perception'; expressions that function as frequent discourse markers in English such *I see*, *you see*, or *see* are never translated with the verb *se* ('see') in Swedish but with other expressions such *jasså* ('yes-

so') or *förstå* ('understand'). These examples from Basque, Spanish, and Swedish point out an area that requires further research: what one may call metaphor salience or describe in terms of how pervasive a conceptual mapping is in a given language and culture.

This culture sieve is also essential when speakers share the same language but not necessarily the same cultural background. Spanish illustrates the point. One of the meanings in Spanish in the sense of touch is 'to fall to', 'to correspond' (see González-González 2010; Ibarretxe-Antuñano 1999a, 2006), as exemplified in (9):

(9) *Ojalá me toque ver a mis nietos* ('I.wish I.dat touches see to my grandchildren': 'I wish I happened to see my grandchildren').

(10) *A ustedes les tocó vivir el ciclón del 59, ¿verdad?* ('to you.pol.pl they.dat touched live the cyclone of.the 59 true': 'you lived through the ′59 cyclone, didn't you?').

(11) *Le tocó sacarse la lotería* ('he.dat touched took.out the lottery': 'he won the lottery').

What is interesting about these examples is that the interpretation of a Peninsular Spanish and a Mexican Spanish speaker might not be the same, given their different cultural backgrounds. In both cases, due to the affective dative construction in which the verb *tocar* ('touch') occurs, participants are considered to be passive and affected by the event: i.e., experiencers (Maldonado 1999). That said, according to González-González (2010), the Mexican speaker would necessarily think of predestination: either religious (i.e., God's will) or not depending on the speaker's beliefs. This can be explained by taking into account the 'fatalist' viewpoint of Mexicans: the view that all are governed by destiny or God's will and cannot help it. In consequence, they see themselves as victims of predestination.

3.2 Motion metaphors in language and culture(s)

Along with being sensitive to the broad cultural environment of peoples, metaphor also responds to 'narrower' contextual factors. To understand the mechanics of metaphor, one must take into account the topics it helps articulate, the people using it to communicate, and the goals fulfilled by the interaction in which it plays a role. Since all three are defining traits of *genre*, a concomitant approach seems worth trying in metaphor research. If one really wants to understand the ways metaphor and culture interact, then bringing in both the co-textual and contextual factors determining figurative uses of language may shed light on the culture/metaphor relationship.

To see the benefits of a genre-based approach to metaphor, consider the phenomenon variously known as *abstract motion* (Langacker 1986), *subjective motion* (Matsumoto 1996) or *fictive motion* (Talmy 1996, Matlock 2004) whereby motion verbs that typically convey actual displacements from one place to another are used to describe static scenes instead. While *climb* in *my brother likes to climb the mountains near our house* expresses a real motion event, *the road climbs the mountain* describes the upward trajectory of a road: an intrinsically static entity.

Lakoff and Turner (1989: 142-144) regard this phenomenon as an instance of the metaphor FORM IS MOTION whereby understanding of certain spatial arrangements and topologies rests on particular ways of moving: i.e., the locational use of motion patterns is motivated by a metaphor where motion is mapped onto form or shape. In contrast, Langacker (1986) claims that such expressions do not instantiate a mapping from a spatial onto a non-spatial domain but designate a spatial configuration as dynamically construed by the speaker or writer. In the example above, this construal invokes the road as seen or profiled in full: i.e., imagined and verbalized through the simultaneous activation of every location in its spatiotemporal base. *The road climbs up the mountain* conveys a certain sense of motion, but this does not imply a metaphorical mapping from a motion domain onto a spatial one. Finally, Talmy (1996) suggests that fictive-motion expressions concerned with spatial descriptions are metaphorically motivated regardless of whether they evoke actual motion for every speaker. By framing the expressions within the broader notion of *ception*, which encompasses both perception and conception, Talmy brings to mind Lakoff and Turner's (1989) forementioned FORM IS MOTION while drawing attention to the phenomenon's simultaneous perceptual – specifically visual – and conceptual qualities.

The default context for researching fictive or abstract motion has been general discourse, the data under scrutiny often replicating explanations provided by cognitive scholars. When one moves towards more specific contexts where motion verbs are used to predicate static entities, one gets a more interesting picture. By way of illustration, consider the following examples:

(12) *The new library eases gently into a Wild West landscape of rolling forested hills and snow- capped mountains* [RUSTIC REGIONALISM, Architectural Review].

(13) *A lovely bouquet which eases into a big fruit-filled presence on the palate* [http://buyingguide.winemag.com/Item.aspx/4295000020].

In a conventional narrative scenario, the verb *ease* expresses gentle, easy motion. Although this semantic information is preserved in these examples, the verb is used to convey radically different things, instantiating metaphors concerned with the sensory experiences afforded by a spatial arrangement and a wine respectively. In (12), *ease* describes what a building looks like in its spatial context. By contrast, in (13), *ease* somehow blends what a wine smells, tastes, and feels like inside the mouth – taste being inextricably linked to smell and touch (Caballero 2007, Caballero & Suárez-Toste 2010). The examples illustrate metaphors where information from the MOTION source domain is recruited to describe properties of buildings and wines as perceived by the speaker or writer.

In architectural and wine discourse, part of the interest in motion metaphors lies in the physicality of both the source and the target domains. A core assumption in CMT is that abstract thinking is heavily determined by the functioning of the human body: concrete experiences in and with the world provide the basic data for understanding abstract, non-concrete things (Lakoff & Johnson 1980, 1999). Nevertheless, although helping understanding of the most abstract via the most concrete is one of the

most salient properties of metaphor, this does not rule out the concreteness of both source and target in certain metaphors, as illustrated by (12) and (13).

What might be called ARCHITECTURAL FORM IS MOTION is a general and conventional metaphor reflecting the visual thinking that characterizes architects. It underlies the way this cultural group sees (i.e., understands) and discusses their reality (i.e., space). The verbs employed in this endeavour may be seen as instantiating more refined or detailed versions of that general metaphorical frame. Before taking this point further, consider the following example:

(14) *The centre curves embryonically around a central square, its north-south spine traced by a public footpath through the site. Another historic route, the path of an old road, is picked out by paving and runs diagonally through the square from a ceremonial gateway between Bioscience and Genetics. An old market keeper's house in the square, like a navel in the body, has been restored and is an umbilical cord with the past. The business-like Genetics Institute is oriented towards the street rather than the square, and linked to the lower Helix Gallery by a "ski slope". It sets in motion a spiral that cascades down to the gallery's lowest curve* [AEC50_GENETIC ENGINEERING].

Here, parts of a building are portrayed via such motion verbs as *curve*, *trace*, *run*, and *cascade* –all concerned with articulating the external appearance of the entities at issue.

The metaphor ARCHITECTURAL FORM IS MOTION does not cover all the complexities of motion use in architectural assessment. While the dynamic portrayal of space rests upon the displacement component of the verbs employed, the particularities of the spatial entities thus predicated rely upon the specifics of motion encapsulated by each verb. In the case of (14), *curve* is a de-nominal verb concerned with the contour of the building, as also is *trace*; *run* expresses continuous, uninterrupted space; *cascade* suggests the forceful display of architectural form.

Motion verbs also play an important role in wine assessment. Here are examples of their occurrence in wine-tasting notes:

(15) *Full, classy and exciting from the first sniff to the last essence of the finish. Along the way is a largely flawless wine that bobs and weaves; at one moment it's forward and seemingly modern. Then it'll go all classic on you. Overall it's a beauty with structure and style. The real deal in newer-style Brunello* [WEC282_WINE ENTHUSIAST-726].

(16) *Smooth, spicy nose. Plenty of fruit coursing through a good structure. Holds up well. Long, spicy finish* [WEC183_DECANTER-247].

(17) *The flavors cascade in endless tiers, blackcurrant, cherry, mocha, Indian pudding, oak and spice, all coming together in an exciting focus that lasts through a minute-long finish. Magnificent* [WEC379_WINE ENTHUSIAST-366].

(18) *Fabulous ripe berry sweetness in the mouth, with coffee and fudge and a softness that washes over the palate before spice and tannins begin to build. The lip-smacking cherry acidity*

and silky tannin quality push through into a long, beautifully focused and quite delicious finish [WEC145_CANNAVAN-31].

The verbs *bob*, *weave*, *go*, *sit*, *course*, *cascade*, and *push* are all used to describe organoleptic perception via the nose and mouth: a complex phenomenon that requires accounting for two critical attributes in wines: (a) the intensity of their aromas, flavours, and texture (or *mouth feel*) and (b) the durability or persistence of these features. Since both 'intensity' and 'persistence' are scalar variables, it seems reasonable to infer that the choice of verb in tasting notes is somehow determined by the semantic information the verb provides. *Course*, *cascade*, and *push* in (16)-(18) are used whenever aromas or flavours are forcefully or intensely perceived in agreement with their own semantic properties; these verbs convey forceful and speedy motion. By contrast, *bob* and *weave* in (15) describe flavours as subtle but noticeable – following the semantic properties of these verbs. Regarding persistence, often the higher the intensity the lower the persistence and the other way round: e.g., *bob* and *weave* suggest both subtlety and persistence in the mouth, as reinforced by their co-text.

In sum, motion expressions in tasting notes provide information about what wines smell, taste, and feel like in a dynamic rather than in more conventional or literal static way, highlighting particular aspects of those sensory experiences. The idiosyncrasies of smell, taste, and *mouth feel* in relation to wine may be seen as constraining the type of verb used (Caballero 2007). As happened with architects, the culture built around wine-tasting experts determines the way motion metaphors are conventionally used in that community.

The use of motion verbs to predicate static entities is not restricted to English but is also found in Spanish. Consider:

(19) *El acceso al cuerpo principal se produce en la segunda planta tras un ascenso alrededor del muro: una rampa que arranca del suelo y enfrenta al visitante con la imponente presencia de la colina para, después de esta vista, girar bruscamente y, sin dejar de ascender, adentrarse en el museo, dejando el estanque a un lado. Desde esta entrada—que vuela sobre el foyer que se encuentra debajo—se puede acceder a las salas de exposición o continuar el paseo exterior que recorre todo el edificio y conecta las distintas terrazas*' [ASC19_ARQUITECTURA VIVA-52-1]. ('The access to the main volume is done through the second floor after ascending around the wall: a ramp that starts from the ground and makes the visitor face the imposing presence of the hill, then turns brusquely and, without stopping its ascent, goes into the museum leaving the pond on one side. From this entrance – which flies over the foyer below – one can access the exhibition rooms or go on the exterior walk which runs around the whole building and connects the several terraces'.)[5]

5 All translations are the authors'.

(20) *[La cubierta del edificio] se curva ligeramente para alcanzar la cota del suelo. De este modo se crea una gran terraza que flota sobre el suelo…. De este plano suspendido – que también se utiliza como plataforma de exposiciones al aire libre – emerge una serie de elementos metálicos* [ASC37_ARQUITECTURA VIVA-1998-3]. ('[The building's roof] curves slightly in order to reach the ground level. This way a big terrace is created, which floats over the floor…. From this suspended surface – which is also used as a platform for open-air exhibitions – a series of metallic elements emerges'.)

(21) *En nariz es muy complejo. En primer lugar aparecen frutas negras en licor, que dan paso a toques balsámicos. Según se abre el vino salen matices torrefactos muy sutiles y ligeros toques de cacao* [WSC11_CATAVINOS-2]. ('Complex nose. Black fruits drenched in alcohol make their appearance first, and give way to balsamic notes. As the wine opens, subtle coffee notes and light cocoa nuances set forth'.)

(22) *Su intensidad aromática es media/baja, presentando una nariz limpia y que denota juventud, donde se despliegan aromas de frutas frescas como manzana verde y cítricos…. Los aromas terciarios están bajo un manto de fruta madura. Posteriormente discurren almendras tostadas, con toques especiados, vainillas y notas balsámicos* [WSC114_DEVINUM-2009-3]. ('Medium/low aromatic intensity. Clean and youthful nose where fresh fruit aromas of green apple and citric fan out.… Tertiary aromas lie under a mantle of ripe fruit. Later toast almonds flow accompanied by spices, vanilla and balsamic notes'.)

(23) *La fruta negra… acompañada de notas minerales, chocolate, sensaciones balsámicas, forman un todo que va fluyendo lentamente desde lo más profundo de la copa hasta hacerse enorme al entrar en la nariz que lo espera. En boca, el volumen se hace patente, la complejidad frutal envuelve suavemente el espacio bucal* [WSC52_CATAVINOS-43]. ('Black fruits… accompanied by mineral notes, chocolate and balsamic highlights make up a whole that flows slowly from the bottom of the glass until it grows when entering the nose that waits. The volume is evident in the mouth, and a complexity of fruit wraps the mouth cavity gently'.)

Here, similarly to what happens in English, the Spanish verbs *arrancar* ('start off', 'depart', 'run away'), *girar* ('spin'), *ascender* ('go up'), *adentrarse* ('walk into'), *volar* ('fly'), *recorrer* ('move', 'go around a place'), *curvarse* ('curve', 'bend'), *alcanzar* ('reach'), *flotar* ('float'), and *emerger* ('emerge') are used in architectural assessments to describe what a spatial entity – a whole building or parts of it – looks like. Likewise, the verbs *aparecer* ('appear'), *dar paso* ('give way'), *salir* ('go out'), *desplegarse* ('fan out', 'unfold'), *discurrir* ('move', 'go around a place'), *fluir* ('flow'), and *entrar* ('go into') in wine-tasting notes describe the organoleptic properties of the wines and are chosen in agreement with the intensity and persistence dimensions to be communicated to potential drinkers.

The findings sustain the satellite- versus verb-framed categories within which English and Spanish have been classified (Talmy 2000): the English verbs encapsulate richer information about the particulars of motion, whereas most Spanish verbs lexicalize the direction of motion. Accordingly, the

English data are more expressive and detailed than the Spanish (Caballero & Ibarretxe-Antuñano 2013, *forthcoming*). That the communities of architects and wine critics in such typologically different languages use motion to articulate spatial and organoleptic experiences reinforces our claim concerning the importance of culture in metaphorical thinking and communication. A look at how different communities use metaphor underlines the need to take the notion of acculturation into account in metaphor research: i.e., the impact of discourse interaction on the entrenchment and elaboration of the metaphorical scenarios that underlie the worldview and language of a given community. Only after getting familiar with and learning how to use these metaphors will the new members of a culture acquire full-membership status – in the process further reinforcing the metaphors that characterize the culture of which they have become part.

4. CONCLUDING REMARKS: THE IMPORTANCE OF C(c)ULTURE IN METAPHOR RESEARCH

We have discussed some of the key issues involved in metaphor research. By looking into perception and motion metaphors, we have shown that metaphoricity is relative rather than absolute: it needs to be addressed from a cultural perspective, taking into account the communities (*cultures*) that use metaphor as well as the broader contexts of those communities (*Culture*). We agree that COGNITION IS PERCEPTION is bodily grounded and widely used across several languages. That said, to ascertain the perception mode(s) involved in the metaphor, one needs to explore the way the idiosyncrasies of the Culture(s) articulated by those languages mediate between senses and world. We also agree that the same metaphorical source domain – e.g., motion – can be found in different contexts such as wine and architecture. Only by being acquainted with the shared interests, goals, and needs of a community can the metaphors at play be thoroughly understood, with all their nuts and bolts.

To this end, we have proposed the idea of a culture sieve: a mediating mechanism that helps physical, sensorimotor-based, universal experiences sift through the complex, socially acquired beliefs, knowledge, and worldviews intrinsic to one or several C/cultures. Only by taking this sieve into account will one be able to provide a full picture of the weight of conceptual metaphor in language, thought, and communication.

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