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Conceptual Metaphor Theory: in defence or on the fence?*

Abstract

Conceptual Metaphor Theory is a promising model that despite its deficiencies can be used to account for a number of phenomena in figurative language use. The paper reviews the arguments in favour of and against Conceptual Metaphor Theory in terms of the data, methodology and content. Since the model focuses on regularities, it is less useful in the study of idioms, where irregularities are also found. It has, however, enormous potential as it integrates corpus- and discourse-driven findings.
Keywords: conceptual metaphors, mapping, blending, grounding, idioms

1 Introduction

This paper offers a summary of Conceptual Metaphor Theory (CMT), reviewing the arguments in its favour as well as critical voices from various scholars. Several of the critical arguments that reject CMT have been responded to by scholars working in the paradigm of the theory, and these responses either discarded the criticism as unjustifiable or accepted it and proposed modifications to the theory or research methodology. The scholarly parties involved in the academic argument – to use an appropriate metaphor – sometimes misunderstand the other's gunshots. The paper first describes CMT as initially formulated in the early writings and explains how this theory can be integrated in the Cognitive Grammar framework of Langacker (1987). Section 3 will then review the claims that challenge CMT's findings and the supportive evidence.

2 The cognitive view of the motivation of idioms

In Cognitive Grammar, linguistic units are considered symbolic structures, consisting of a pairing of phonological structure with semantic structure (Langacker 1987: 76). Langacker's (1987: 86-96) discussion of componentiality and correspondence includes the analysis of an idiomatic example: *let the cat out of the bag*. To simplify somewhat, the phonological units *cat, out of* and *bag* are identical in the literal and figurative interpretations, whereas the literal

* I wish to thank the two anonymous reviewers for their valuable comments. All remaining errors are my responsibility.

sense is extended metaphorically (Langacker 1987: 93). Furthermore, it is not only the unit *cat-out of-bag* that is extended as a whole, but each of its components also undergoes semantic extension, with each component having a figurative sense: *cat* 'information', *out of* 'out of' and *bag* 'concealment' Langacker (1987: 94).

Motivation is related to the discrepancy between the compositional meaning of an expression and its actual semantic content. The above example suggests that motivation may be considered for each lexical item separately (if they carry meaning). Thus, *bag* 'concealment' is more motivated than *cat* 'information'. Langlotz (2006: 113) calls this constituental motivation and contrasts it with global motivation, which takes the whole expression into consideration.

One of the first studies of how conceptual metaphors can motivate idioms and figurative single words is Lakoff's (1987: 380-415) discussion of anger, which posits the general metaphor ANGER IS HEAT and its versions ANGER IS HEAT OF A FLUID IN A CONTAINER and ANGER IS FIRE to explain the systematicity in numerous linguistic expressions. The book that marked the birth of CMT is Lakoff and Johnson's (1980) seminal work. The authors claim that our language is saturated with metaphors, rooted in recurring bodily experience, and our language is metaphorical simply because our conceptual system is metaphorical. The publication of their book launched a quest for conceptual metaphors that guide our thinking and permeate language. A number of conceptual metaphors are collected and exemplified by Lakoff et al. (1991), Langlotz (2006), Kövecses (2010) and Goatly (2007). These metaphors consist of systematic mappings between relatively concrete source domains and rather abstract target domains, including the ontological correspondences and their entailments (Langacker 2000: 39). Underlying the metaphorical expression in (1) is LOVE IS A JOURNEY, itself an instance of more general high-level metaphors such as LIFE IS A JOURNEY or DEVELOPMENT IS MOVEMENT IN SPACE (Langacker 2000: 40, Langlotz 2006: 159).

(1) Our relationship is spinning its wheels.

The lovers correspond to travellers, the love relationship corresponds to the vehicle and the lovers' common goals can be identified with their common destinations (Lakoff 1993: 207). Since metaphorical extension is one form of a categorizing relationship in Langacker's (1987: 92, 2000: 39) framework, Langlotz (2006: 68) views conceptual metaphor as fulfilling the role of categorization. The link between the literal and figurative meaning of (1) is established by the metaphor DEVELOPMENT OF A LOVE RELATIONSHIP IS A JOURNEY (Langlotz 2006: 68).

3 Critical voices

Gibbs (2011) provides a state-of-the-art overview of Conceptual Metaphor Theory. Based on his reviews, two areas of criticism can be identified: (a) criticism of the data type and methodology, and (b) criticism of the conclusions drawn from the data. It has to be noted that CMT scholars have responded to several challenges and modified some of their original assumptions. The distinction of criticism directed at the linguistic examples and that directed at theoretical claims is artificial inasmuch as the focus on certain types of data is closely related to theoretical assumptions. For example, Keysar et al. (2000: 591) suggest that the major reason for their rejection of CMT's claims is its conflation of literal (i.e. conventional) and metaphorical language. Thus, the nature of the data is one of the reasons why CMT is

attacked. Another reason is the difference in focus and methodology between various scholars. CMT was originally formulated as a theory of what our conceptual system is like based on intuitive linguistic expressions, while a number of critics have a psycholinguistic orientation with experimental methodology and a focus on immediate metaphor processing. Psycholinguists are concerned not only with whether conceptual metaphors exist in long-term semantic memory, but also with how conceptual metaphors are activated or accessed during processing and production. Phraseologists' interests are also different. Dobrovol'skij and Piirainen (2005: 130), who formulate several critical remarks, openly admit the difference between their goals and CMT's objectives. While CMT is concerned with the regularities that underlie a large number of expressions, phraseologists tend to study not only what is shared by the different idioms but also what is different and idiosyncratic at a more specific level. For example, *split hairs* or *throw the baby out with the bath (water)* are motivated at the basic level of rich images and we cannot formulate conceptual metaphors at the superordinate level (Dobrovol'skij & Piirainen 2005: 90-91).

3.1 Criticism of data and methodology

3.1.1 Intuition and nominal metaphors

Researchers of conceptual metaphor have often been criticized for using examples that are unrepresentative of "genuine" metaphorical language or simply not metaphorical at all. In psycholinguistic and philosophical approaches, but not in CMT, the majority of examples conform to the "A is B" form (Gibbs 1999a: 31). However, this is an advantage rather than a drawback. Cameron (1999: 15) argues that nominal metaphors of the "A is B" format may be less common than verbal metaphors, and metaphorical expressions often deviate in their syntax from the classic "A is B" type (*lollipop trees*; *the trees took the fire and hid it*; *you have to stick to your guns*). In one of her criticisms of the examples used by psycholinguists, Deignan (2008a: 152) shows that metaphorical *shark* tends to occur in different patterns than "A is B". Both Gibbs (1999a: 31) and Steen (1999: 81) advise scholars to be aware of the diversity of metaphor and not restrict their examples to the "A is B" or "A is like B" forms.[1] Ritchie (2013: 35-37) reports psycholinguistic findings suggesting that emergent features not associated with either the source or target but emerging from the metaphor itself are also important in metaphor interpretation. However, all the examples are of the pattern *the* N *is an* N *among* N (*the eagle is a lion among birds*).

While work in CMT has been marked by examples of a broad range of different syntactic patterns from the beginning, in the early stages invented sentences or texts were used (Kövecses 2011a: 24). Data of this type can be found in Lakoff and Johnson (1980, 1999), Lakoff (1993) and Gibbs (1994). Although the standard procedure was to use self-constructed language, there were some exceptions. This "mainstream" methodology was often avoided in favour of naturally occurring text by scholars adopting a discourse or language-in-use approach, as several publications in edited volumes such as Liebert et al. (1997) and Cameron & Low (1999) testify. Furthermore, reliance on natural language was, and still is, the hallmark of the study of metaphor in literature (see Lakoff and Turner (1989) for one of the earliest

[1] Coulson and Van Petten (2002: 961) also implicitly criticize psycholinguistic experiments for using nominal metaphors alone without further context.

CMT studies using "corpus" data). Finally, Jäkel (1995) and Goatly (1997: 41-81) used examples collected from corpus-based dictionaries, though not from corpora directly.

The question of what kind of linguistic data should be used is inextricably linked with the problem of metaphor identification. In the conceptual metaphor literature, no explicit criteria of metaphor identification were given until recently. Gibbs (2011: 535, 2013: 21) mentions some attempts to develop computational models, and although the date of the first attempt is 1990, the next date is 2004. Stefanowitsch (2006a: 11) also lists some attempts at a more rigorous identification, all dated from the beginning of the 2000s, but notes that "they stand relatively isolated, and have not received the intensive theoretical discussion they deserve, nor the broad empirical testing needed to determine whether they can be reliably applied".

Kövecses (2011a: 24) defends the dominant methodology of introspection, arguing that the conclusions reached on the basis of intuitive data have been subsequently confirmed by psycholinguistic experiments. Though not in the context of CMT's defence, a similar remark is made by Goatly (1997: 46), who also notes that many of the intuitions are consonant with lexicographic evidence. Furthermore, Deignan (2008b: 293) holds that "[s]tudying linguistic metaphors in naturally occurring data has not produced findings that contradict contemporary metaphor theory, but it has suggested that other factors affect metaphor choice". Csatár (2009: 41) also argues that the intuitive method cannot be excluded but prefers the combination of two or more sources of data. There is a growing tendency to use a combination of different data types and/or support claims with quantitative calculations, witness Johansson Falck and Gibbs (2012) or the papers in Stefanowitsch and Gries (2006).

3.1.2 Metaphor in thinking

Kövecses's (2011a: 25-27) central argument in defence of intuition reminds us of the *langue-parole* or *competence-performance* distinction. Conceptual metaphor theory arose with an aim to uncover systematic mappings at the supra-individual level, i.e. in our conceptual system (*langue/competence*), and these mappings are then used and applied in specific contexts for communicative purposes by speakers at the individual level (*parole/performance*). The criticism directed at the methodology of data gathering and the nature of the data apply at the individual level, but cannot be directly transferred to the supra-individual level, the level that CMT is primarily concerned with (Kövecses 2011a: 25).

A key tenet of CMT is the conceptual nature of metaphor and critics have expressed the need to demonstrate this with non-linguistic evidence (see, for example, Murphy (1996: 184)). The challenge has been accepted and there is now a large amount of evidence. A number of cross-linguistic similarities in conceptualization show that metaphor may be independent of a particular language (for universal metaphors see Kövecses (2010: 195-210) and the references therein). Metaphor is widespread in the visual medium (movies, cartoons, drawings, sculptures, advertisements, gestures) as well as social institutions and social practices (Lakoff 1993: 241-243, Kövecses 2010: 63-73). Lakoff and Johnson (1999: 164) explain how TIME IS A RESOURCE and TIME IS MONEY are reified in paying people by the hour or week, in time clocks or business hours. Goatly (2007) is a book-length study of the pervasive presence of metaphor in human practices related to industrialization, buildings, speed, racial categorization, the commodification of nature, etc.

What is even more remarkable is that people use conceptual metaphors in thinking (Gibbs 2011: 540). In a series of experiments, Thibodeau and Boroditsky (2011) examined how people reason about crime. They found that those who had read texts in which crime was

metaphorically described as a virus drew different inferences and suggested different solutions than those who had been presented with a conceptualization of crime as a beast. Gibbs (2011: 540-542) provides a list of psycholinguistic studies that lead us to conclude that conceptual metaphors exert an influence on people's perception, cognition, as well as evaluative judgments.

It is not only the introspective method that is criticized but also the lack of effort to find all the metaphorical expressions and conceptual metaphors for a given target (Kövecses 2011a: 33). Kövecses (2011a: 35-36) believes that an exhaustive search for all the metaphors together with a frequency-based analysis may hide key aspects of target domains represented by less common metaphors that are nevertheless significant in defining (the cognitive model of) a target concept. He cites Stefanowitsch's (2006b) study of emotion metaphors, which failed to find significant metaphors that are crucial in understanding emotions such as EMOTIONS ARE NATURAL FORCES, EMOTIONS ARE OPPONENTS and EMOTION IS INSANITY, whereas identified as significant metaphors that are too general to be of interest. I believe this criticism is partly wrong. If we are interested in features of one emotion that distinguish it from another, then the general metaphors may not be informative, but it is significant to know that emotional states are very commonly conceptualized as containers or objects, causes are viewed as forces and change as motion.

The inexhaustiveness of the data is a concern that is also voiced by Kertész et al. (2012: 722), though they formulate this charge only with respect to the first significant piece of research: Lakoff and Johnson (1980). They argue that the non-metaphorical, non-figurative expressions related to the target domain also have to be considered to assess the ratio between the "used part" and "unused part" of a metaphor. For example, the ARGUMENT domain includes items such as *refute*, *disprove*, *accept a motion*, *argue*, *difference of opinion*, *establish a conclusion*, etc. (Kertész et al. 2012: 722, n 1). This preference for a single data type – familiar, conventional metaphors – is certainly characteristic of CMT research and gives rise to the critical view discussed in the next section.

3.1.3 Dead metaphor

The linguistic examples used by CMT scholars are regarded by critics as dead metaphors, expressions that were once metaphorical but have now lost their figurativity and are completely literal (Keysar et al. 2000: 591, McGlone 2007: 121, Gibbs 1994: 273, 2011: 534). Geeraerts (2010: 209), for example, notes that a possible alternative to claiming that *strike* instantiates the metaphor EMOTIONAL EFFECT IS PHYSICAL EFFECT in *I was struck by his sincerity* is to claim that the verb has developed the literal sense 'to surprise, to affect suddenly', which does not evoke metaphorical mappings today. Instead of metaphorical extension, a schematic, fairly abstract and general meaning could be posited that includes the allegedly metaphorical sense. This is especially useful if there are not many correspondences between the entities in the two domains, such as A MOUNTAIN IS A PERSON, based on *the foot of the mountain* (Geeraerts 2010: 210). Backed by corpus evidence, Deignan (2005: 138-139) doubts that *scapegoat*, *curb* or *inflamed* found in various CMT scholars' writings reflect mappings that are still alive.

As I remarked above, this criticism could have arisen because CMT lays emphasis on conventional metaphorical expressions, which are automatic, subconscious and often inconspicuous in discourse. Downplaying the metaphoricity of these expressions ignores the possibility that people may have tacit knowledge of conceptual metaphors (Gibbs 2011: 534).

A large body of psycholinguistic evidence supports the psychological reality of these "dead" metaphors. Lakoff and Johnson (1999: 81-86) list nine types of evidence in favour of CMT: (a) inference generalizations; (b) polysemy generalizations; (c) novel-case generalizations; (d) psychological experiments; (e) historical semantic change; (f) spontaneous gesture studies; (g) language acquisition studies; (h) sign language metaphor studies and (i) discourse coherence studies. Evidence (a) refers to speakers' ability to reason about a target domain (e.g. LOVE) using inference patterns for the source domain (e.g. JOURNEY). Under (b) and (c) are subsumed cases showing that source domain words may develop systematically related (established or novel) target domain senses. The same systematic correlation can also be observed in the semantic change of words (see e above), when, for example, root words originally meaning 'see' come to mean 'know' in accordance with the metaphor KNOWING IS SEEING. It is beyond the scope of this paper to illustrate each type of evidence, but psycholinguistic findings (see d above) are discussed in more detail by Gibbs (2011: 541-549). To (f) could be added all the examples of non-linguistic manifestations mentioned in 3.1.2. Murphy (1996: 194-195) doubts that psycholinguistic findings about idioms, polysemy generalizations and historical semantic change are direct evidence for the metaphoricity of concepts. Idiom research simply shows how linguistic expressions are stored and other research findings can be explained with the structural parallelism between disparate domains. The structural similarity view resembles CMT but it does not presuppose the causal role of metaphor in structuring concepts.

3.1.4 Argumentation and heritage

A methodological error which is related not to data treatment but to overall methodology and which CMT scholars are said to make is circular argumentation (Murphy 1996: 183, Keysar et al. 2000: 577, McGlone 2007: 115). We know that our conceptual system is metaphorical because of the many systematic metaphorical linguistic expressions, and our language is metaphorical because our conceptual system is metaphorical. Kertész et al. (2012: 720) point out that this same accusation is often levelled at other rival metaphor researchers. More importantly, they defend CMT's argumentation, claiming that when the starting point is the linguistic examples and we conclude the metaphoricity of the conceptual system, we are at the methodological level, but the other directionality takes us to a different, ontological level (Kertész et al. 2012: 721).

Another critical remark often heard is that proponents of CMT highlight the novelty of their approach, but often tend to ignore past contributions expressing similar ideas. Jäkel (1999) as well as Nerlich and Clarke (2007) provide examples of several theorists who entertained ideas very similar to the central assumptions of Cognitive Linguistics. Closely related to this point is Murphy's (1996: 179) and Dobrovol'skij and Piirainen's (2005: 123) opinion that Lakoff and Johnson paint a distorted and extreme picture of the proponents of the traditional, objectivist school. Similarly, Kreuz and Graesser (1991: 91-92) criticize Nayak and Gibbs (1990) for presenting the traditional theory of idioms in a bad light. Gibbs and Nayak (1991: 93-94) reply that the literature they are familiar with assumes that idioms have meanings that can often be captured by single words and rich semantics cannot be found in traditional theories. They agree with the point that *flip your lid* conveys abruptness but claim that this is not the result of the semantic component 'abruptness' of the verb being mapped onto the figurative meaning, but the result of metaphorical mappings. I would add that the problem is not why the verb has this semantic feature, but how we can insure in a

compositional view of semantics that this feature rather than other features be mapped onto the idiomatic meaning.

3.2 Criticism of CMT's claims

The close relationship between data type and theory was highlighted above in 3. It is important to bear in mind that the critical remarks concerning CMT's claims may be attributed to differences in data and interest between various scholars. The "rival" theories can be considered complementary and no single theory may account for the broad range of metaphor phenomena. Grady (1999: 97-98), Gibbs (1999a: 39-40) and Bortfeld and McGlone (2001: 77-79) among others urge scholars to consider alternative assumptions because metaphor type and understanding are not homogeneous.

3.2.1 CMT as a comprehensive theory of figurative language

In his critical article, McGlone (2007: 112) attempts to evaluate CMT as a "comprehensive theory of figurative language", yet Gibbs (2011: 530) warns us that CMT is not a general theory that applies to figurative language as such. He advises theorists to exercise caution and not attempt to fit all examples to the theory (Gibbs 1999a: 36). The same view is shared by Bortfeld and McGlone (2001: 77), who regard domain mapping and attributional theoretical models as complementary, rather than rival theories. Three types of metaphor may be difficult to account for in CMT: (a) creative, poetic metaphor, (b) image metaphor and (c) nominal metaphor (see 3.1.1 above). These categories are not mutually exclusive, as they classify metaphors from different aspects. The label "creative, poetic metaphor" refers to the type of discourse where such metaphors are often found, image metaphors are defined with respect to the mapping mechanism – they are one-shot mappings of an image onto another as in *My wife…whose waist is an hourglass* (Lakoff 1993: 229) – and nominal metaphors are identified simply through their syntactic form (A is B).

CMT researchers cannot be blamed for trying to explain these metaphors using the CMT apparatus, since the new conceptual view of metaphor seemed to be a promising approach when it emerged. However, the metaphor types listed above are presented as based on the same conceptual mechanisms as ordinary conceptual metaphor. This stance of CMT researchers is not sufficiently discriminatory and thus conveys the impression that the theory applies to all types of metaphor. Image metaphors are considered to be conceptual, since a correct interpretation presupposes the knowledge of which part is mapped onto which part (Lakoff 1993: 229-230, Kövecses 2010: 57). Furthermore, Lakoff (1993: 231) sees the same general principle, the preservation of image-schematic structure (parts onto parts, wholes onto wholes), operating in both image metaphors and conceptual metaphors. Metaphors in literature are likewise treated as basically conceptual metaphors that are creatively exploited (Kövecses 2010: 59, Gibbs 2011: 532).

3.2.2 Embodiment: the grounding of metaphor

CMT scholars devote less attention to the metaphor types (a)–(c) in 3.2.1, partly because many conceptual metaphors are held to be experientially grounded in our interactions with our environment, unlike image metaphors or nominal metaphors such as *Achilles is a lion*, which are based on resemblance (Grady 1999). The linking of a source and target domain usually

originates in childhood experiences involving our sensorimotor skills. MORE is linked to UP as a result of the recurring human experience of seeing the level of a pile of objects or substance rise when more quantity is added (Lakoff & Johnson 1980: 16). This embodied view of understanding the world around us leads to an embodied view of figurative language and the universality of metaphor, since correlations in basic bodily experience are presumably the same across different cultures and languages (but see Casasanto's (2009) findings discussed below). The embodied view also means that many metaphors have a metonymic origin, being grounded in direct correlations of experience that are contiguous (Grady 1999, Radden 2002). As Grady (1999: 84) explains, a recurring "primary scene" involves a tight correlation between two dimensions of experience, whereby one is more directly related to sensory input than the other. Thus, NORMAL IS STRAIGHT can be traced back to judging an object flawed due to irregularities in its shape, SIGNIFICANT IS LARGE is based on the experience of paying attention to a large object, DIFFICULT IS HEAVY is grounded in the correlation between lifting a heavy object and experiencing strain (Grady 1999: 80, 84).

Critics responded to the strong emphasis on the embodiment principle by citing evidence that metaphors are not all based on universal aspects of human experience and consequently exhibit variation cross-culturally. This led to the modification of this view by CMT researchers, who now acknowledge the influence of cultural and social factors in the emergence of metaphors (Kövecses 2010: 215-227). Bodily correlation alone cannot explain why, for example, Japanese has the metaphor ANGER IS (IN THE) HARA (Kövecses 2010: 216).

It is important to remind the reader at this point that the role of culture is also mentioned in *Metaphors We Live By*. In the chapter on orientational metaphors, Lakoff and Johnson (1980: 14) argue as follows:

> [Metaphorical orientations] have a basis in our physical and cultural experience. Though the polar oppositions up-down, in-out, etc., are physical in nature, the orientational metaphors based on them can vary from culture to culture. For example, in some cultures the future is in front of us, whereas in others it is in back.

The physical and cultural also combine to provide motivation for RATIONAL IS UP and EMOTIONAL IS DOWN (*high-level intellectual discussion*; *rise above his emotions*). People view themselves as being in control over animals, plants and their environment, and CONTROL IS UP provides a basis for MAN IS UP and therefore RATIONAL IS UP (Lakoff & Johnson 1980: 17). Thus, it seems that physical and cultural are inseparably linked for Lakoff and Johnson (1980). This is perhaps best seen in the following quote (Lakoff & Johnson 1980: 57):

> Thus UP is not understood purely in its own terms but emerges from the collection of constantly performed motor functions having to do with our erect position relative to the gravitational field we live in. Imagine a spherical being living outside any gravitational field, with no knowledge or imagination of any other kind of experience. What could UP possibly mean to such a being? The answer to this question would depend, not only on the physiology of this spherical being, but also on its culture. In other words, what we call "direct physical 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. It can be misleading, therefore, to speak of direct physical experience as though there were some core of immediate experience which we then "interpret" in terms of our conceptual system. Cultural assumptions, values, and attitudes are not a conceptual overlay which we may or may not place upon experience as we choose. It would be more correct to say that all experience is cultural through and through, that we experience our "world" in such a way that our culture is already present in the very experience itself. However, even if we grant that every experience involves cultural presuppositions, we can still make the important distinction between experiences that are "more" physical, such as standing up, and those that are "more" cultural,

such as participating in a wedding ceremony. When we speak of "physical" versus "cultural" experience in what follows, it is in this sense that we use the terms.

In addition, Lakoff and Johnson (1980: 65) also discuss metaphors that are culturally grounded, such as LABOUR IS A RESOURCE or TIME IS A RESOURCE. In their study of literary metaphors, Lakoff and Turner (1989: 66) list not only direct experience but also cultural knowledge as ways of acquiring cognitive models. However, subsequent CMT research stressed the importance of bodily experience and focused on neural and philosophical issues, and culture had to be "rediscovered".

Despite Lakoff and Johnson's (1980: 153-155) rejection of the comparison view of metaphor, it is possible for a metaphor to be based on pre-existing similarities, but they are not inherent, objective similarities. Lakoff and Johnson (1980: 155) in *Metaphors We Live By* analyzes LIFE IS A GAMBLING GAME as based on experiential similarities.[2] Kövecses (2010: 82) sees the motivation behind this metaphor in the similarities people notice between life's actions and consequences on the one hand and gambling and winning or losing on the other. While this reveals that *Metaphors We Live By* does acknowledge the existence of similarities between source and target domains, the predominant type of grounding is not this one. In addition, Lakoff and Johnson (1980) downplay the role of similarity, since they strive to distance themselves from traditional definitions of metaphor.

Criticism of the embodiment hypothesis can take one of two slightly different forms. On the one hand, the conceptual metaphors proposed previously, and abstract thinking in general, are claimed to be better motivated by cultural factors, on the other hand additional candidate metaphors are posited that could not have arisen as a result of physical experience.

Both Gibbs (1994: 198-206) and Kövecses (1999) contest Quinn's idea that cultural models serve as the basis of metaphors. Kövecses (1999) thinks that conceptual metaphors have priority over and give rise to cultural models. Gibbs (1994: 198) is more cautious when he claims that "[s]ome of our conceptual understandings of love, anger and other abstract concepts may be nonmetaphorical, but a great many of these abstract concepts appear to be constituted by metaphor" (Gibbs 1994: 206). Gibbs (1999b) and Emanation (1999) emphasize the interdependence of embodiment and cultural models. Writing about emotions, Goatly (2007: 255) shares their view, claiming that both human physiology and culture motivate metaphors. He also suggests that a number of metaphorical mappings have no experiential origin. For example, *on the breadline* originally referred to the practice of poor people waiting in a line for bread (originally *in the breadline*), but it has been reinterpreted in our bureaucratic culture as referring to lines of graphs/charts, which is still metonymic (Goatly 2007: 260). Confirmation comes from the *Collins Cobuild Dictionary of Idioms*, which gives as alternatives *above the breadline* and *below the breadline* (Moon 1995: 48). While the expression is still motivated, this grounding is not based on basic embodied experience.

Among the metaphors without (seemingly) convincing experiential correlation, Goatly (2007: 275) lists GOOD IS HIGH, ARGUMENT/IDEA IS BUILDING or MONEY IS LIQUID/BLOOD but does not give any reasons. Various explanations may be offered as to why these mappings are exceptions. First, the metaphor may have been identified at a general level where its motivation is not obvious. This may be the case with GOOD IS HIGH. In the CMT literature,

[2] It might turn out that ultimately this metaphor is also composed of several well-motivated metaphors, such as ACHIEVING SUCCESS IS WINNING, ACTION WITH POSSIBLE NEGATIVE CONSEQUENCE IS RISK, etc., which create the similarities. I have found no other metaphors to illustrate grounding in perceived structural similarities only.

HAPPY IS UP, ACTIVE IS UP, CONSCIOUS IS UP and HEALTH IS UP are perhaps the best examples of metaphors based on bodily experience, and GOOD IS HIGH might be a superordinate metaphor subsuming these and perhaps POWER/CONTROL IS UP. The metaphor ARGUMENT/IDEA IS BUILDING can be salvaged if we accept Grady's (1997) notions of primary and complex metaphor.[3] Accordingly, this is a complex metaphor composed out of the experientially motivated primary metaphors ORGANIZATION IS PHYSICAL STRUCTURE and PERSISTING IS REMAINING ERECT.[4] Finally, MONEY IS LIQUID/BLOOD (*cashflow*, *bleed (dry)*, etc. see Goatly 2007: 17) may not have embodied motivation. Phraseologists approaching idioms from a CMT aspect will not be surprised to find experientially odd mappings (*throw the baby out with the bathwater*, *shoot the breeze*, *a storm in a teacup*). Some examples suggest culturally mediated physical experience that is not universal, such as ELECTION IS A HORSE RACE instantiated by *in/out of the running*, *neck and neck*, *also-ran* (Deignan 2005: 22, 28). Goatly (2007: 232, 274) also mentions EMOTION IS COLOUR, which may be experientially motivated but some linguistic expressions instantiating it have no plausible embodied motivation (*blue*, *purple*, *green*) and can only be attributed to the idiosyncrasies of culture and lexicalization processes.

In addition to Goatly (2007), other critics have also doubted the experiential motivation of some conceptual metaphors. Vervaeke and Kennedy (2004: 222) use SOCIAL INTERACTION IS MAGIC (*I'm under her spell*; *she enchanted me*; *I found her utterly charming*) to argue that the source domain cannot be directly experienced, "given that magic does not exist", and remark that "we stress here the idea of actually experiencing the real thing. Let us leave children […] Disney or Graceland aside". First, magic may be real for children. Second, the metaphor should be re-labelled as LOVE IS MAGIC, since it better fits the linguistic data. Third, Kövecses (2010: 117) suggests that HAPPINESS as a target domain is conceptualized as being tickled, intoxicated or warm, because these capture the "feeling tone" of the experience of happiness and these feeling tones of the source domain are sometimes indistinguishable from the target domain. An analogous explanation can be used for LOVE IS MAGIC, though I am aware that if two feelings are "sometimes indistinguishable", they do not automatically form a correlation.

Another much criticized mapping is ARGUMENT IS WAR. Ritchie (2003: 132) draws attention to the infrequency of children or adults actually experiencing real war. Note how Lakoff and Johnson (1980: 61-62) explain the motivation:

> [L]et us examine how the RATIONAL ARGUMENT IS WAR might be grounded. This metaphor allows us to conceptualize what a rational argument is in terms of something that we understand more readily, namely, *physical conflict*. *Fighting* is found everywhere in the animal kingdom and nowhere so much as among human animals [...] Being "rational animals," we have institutionalized our *fighting* in a number of ways, one of them being war [...] We have arguments all the time in order to try to get what we want, and sometimes these "degenerate" into physical violence. Such verbal battles are comprehended in much the same terms as *physical battles*. Take a domestic quarrel, for instance. Husband and wife are both trying to get what each of them wants... [emphases mine]

The words in italics suggest that the source domain should be called FIGHT(ING), rather than WAR. There are strong correlations between the experience of arguing/quarrelling and fighting, especially among children. Cserép (2001: 180, 185) establishes three metaphors (among others) in his study of a related target domain: criticizing. These are CRITICIZING IS A FIGHT,

[3] Grady's (1997) version of this metaphor is THEORIES ARE BUILDINGS.

[4] It is unfortunate that McGlone (2007: 113-114) has chosen THEORIES ARE BUILDINGS to criticize CMT's characterization of the source and target domains.

CRITICIZING IS WAR and CRITICIZING IS PUNISHMENT. Furthermore, based on corpus data, Semino (2006: 44) suggests that ARGUMENT IS WAR should be reformulated as ANTAGONISTIC COMMUNICATION IS PHYSICAL CONFLICT.[5] Ritchie (2003: 132) also points to children's heated disputes involving verbal and physical conflict, "competitive contests and games" as more plausible origins of the metaphor. All this points in the direction of embodied experiential correlation.

As we have seen, what appear to be counterexamples to the experiential hypothesis often turn out to be indirectly grounded in physical experience. Other cases are not so easy to explain. The bodily grounding of emotion metaphors have come under intense criticism. Fernando (1996: 122-124) as well as Dobrovol'skij and Piirainen (2005: 124-128) suggest that the medieval theory of humours and folk or cultural models offer a better explanation. Dobrovol'skij and Piirainen (2005: 124-128) give examples of words and idioms from several languages that evoke the humoural theory, a cultural model that is no longer salient but has left some traces in the language, such as English *choleric*, *be green with envy* or German *jmdm. Läuft die Galle über* [literally someone's gall/bile flows over] 'someone gets very angry'.

The embodiment principle has been developed in two directions. Casasanto (2009) has introduced the body specificity hypothesis to account for the metaphor GOOD IS LEFT. This metaphor reflects people's tendency to map horizontal space onto positive valence (the abstract concept GOOD) on the basis of the dominant side of their bodies. Since left-handers generally use their left hand to interact with their environment more fluently, this perceptuomotor experience gives rise to the association of good things with left. The opposite is true for right-handers. In his experiments, participants consistently produced this correlation independently of whether they were asked to make value judgments by drawing (using their hands) or orally. Since conceptual metaphors link abstract target concepts with embodied source concepts, they are presumably grounded in embodied experience, not in linguistic experience. The same influence of the body is also observed in children and in people who have temporarily lost motor fluency of the dominant side due to injury (Casasanto & Chrysikou 2011, Casasanto & Henetz 2012). Note that this raises several intriguing questions. Do people with impaired vision, for example, have a different KNOWING/UNDERSTANDING IS SEEING metaphor? Or do they have the same metaphor but its salience or role is different? Does bodily experience vary from geographical region to region, person to person and we have a continuum in terms of universality and variation?

A related notion is embodied simulation. An issue that is addressed in embodiment studies is to what extent embodied experience influences metaphor. Is it only the origin of the metaphor that involves embodiment but conceptual metaphors are passively retrieved during comprehension? Johansson Falck and Gibbs (2012: 253) argue that people create embodied simulations of metaphorical language that involve "what must it be like" processes and these are active in metaphor processing. They have found that both *path* and *road* can be used in metaphors with JOURNEY as the source domain and COURSE OF ACTION/WAY OF LIVING, PURPOSEFUL ACTIVITY/LIFE, POLITICAL DEVELOPMENT/PROCESS, FINANCIAL DEVELOPMENT/PROCESS as the target domain (Johansson Falck & Gibbs 2012: 262). However, only people's mental simulation of the typical actions in journeys along roads and paths can explain why *road* is much more frequent when talking about PURPOSEFUL ACTIVITY/LIFE but *path* is preferred for COURSE OF ACTION/WAY OF LIVING (Johansson Falck & Gibbs 2012: 267-

[5] An alternative name could be QUARRELLING IS FIGHTING.

268). They dismiss the hypothesis that this difference is due to differences in the conventional meanings of *road* and *path*, but their reasons are not convincing. First, meaning is encyclopaedic and the sense of a lexical item includes speakers' rich conceptualization. Part of the meaning of *road* is that it is usually wider and straighter than a path, a lot of people travel on it in vehicles, etc. Johansson Falck and Gibbs (2012: 258-260) cite dictionary definitions to argue against the idea that the meanings of these words can account for differences in their use, but dictionary definitions are usually succinct formulations guided by various principles, such as economy of space, and cannot be expected to reflect the rich understanding speakers have in their minds. Of the five dictionaries the authors consulted, only one carries the word "Encyclopaedic" in its title (*Webster's New Encyclopaedic Dictionary*), two are college dictionaries (*The American College Dictionary*, *Merriam-Webster free online dictionary*), one is a thesaurus (*NTC's Thesaurus of Everyday American English*) and one is an unabridged dictionary (*The American Heritage Dictionary of the English Language*).[6] Word meanings can also be analyzed using the kind of elicited intuitions that Johansson Falck and Gibbs (2012: 256) in fact employ but they interpret the result as evidence for embodied simulation. Second, the explanatory power of conceptual metaphor is not limited to the identification of correspondences, as Kövecses (2011a: 30) explains. Differences between *add fuel to the fire* and *flare up* are due to different underlying mappings within the same conceptual metaphor (INTENSITY IS HEAT) (Kövecses 2011a: 32). While *road* and *path* presumably do not differ in the correspondence they refer to, both identifying the mapping of road/path to the sequence of stages that metonymically stands for the target domain, they focus on different types of surface and thus different types of action/life/process.

The scepticism expressed in the previous paragraph notwithstanding, a number of studies indicate that metaphor processing could involve embodied simulations. Understanding metaphorical words and phrases requires that listeners engage in simulations of the described action (Gibbs 2006: 441). Santana and de Vega (2011) have reported interaction between body motion along the vertical axis and comprehension of sentences containing UP/DOWN orientational metaphors. Gibbs (2006) summarizes various psycholinguistic studies that suggest a fundamental connection between sensorimotor experience and metaphor understanding, even when the language presented is literally impossible (*grasp a concept*). At the same time, he also advises caution in interpreting the results. Not all metaphors are alike, and not all of them necessarily involve simulations (Gibbs 2006: 455). In addition, simulation may be partial and it is not clear how rich or detailed the imagined situation is. Santana and de Vega (2011: 10) argue that

> the sentences [used in their experiments] varied considerably in the sensory-motor features of the vertical motions being referred to (compare "*falling* sick" and "*burying* hopes"), whereas the requested body action was always a simple upward/downward finger motion. In spite of that, meaning-action interaction occurred. This suggests that actions are simulated at a relatively abstract level of motor processing (e.g., gross directional parameters) rather than in detail, e.g., at the level of specific motor programs.

[6] I am aware that dictionary titles may be misleading and the absence of the word "encyclopaedic" from the title does not necessarily mean that the dictionary is not encyclopaedic.

3.2.3 Source domain and target domain

Early studies in the CMT spirit involved metaphorical mappings between relatively concrete source domains and abstract target domains, which is not surprising, since metaphor is viewed as helping to understand abstract, not clearly delineated concepts. Kövecses (2010: 17-26) lists some common source and target domains. Source domains include the human body, animals, plants, buildings, machines, games and sports, heat and cold, light and darkness, movement, etc. Target domains can be put into categories such as psychological and mental states and events (emotion, morality), social groups and processes (economy, human relationships) personal experiences and events (time, life, death) (Kövecses 2010: 27).

Understanding the target domain in CMT is indirect, i.e. metaphorical (Lakoff & Johnson 1980: 177, Lakoff 1993: 244). Lakoff's (1987, 1993) and his co-researcher's (Lakoff & Johnson 1980, 1999) effort to discredit the objectivist view of meaning is one of the reasons why this metaphorical understanding is emphasized. If action, state, change, time, morality, causation, etc. are understood metaphorically, then there can be no objective truth (Lakoff & Johnson 1999: 118-129). Therefore, it is important to see the metaphorical nature of these abstract concepts.

Critics maintain that some direct understanding of the target domain should be possible, otherwise the source and target would be identical. Consequently, Vervaeke and Kennedy (2004: 217) believe that the target domain has to have some premetaphorical structure. A similar criticism is expressed by Murphy (1996: 180-181) and later repeated by McGlone (2007: 113-114).[7] The early studies that Murphy (1996) was familiar with do indeed allow this strong interpretation. Consider Lakoff and Johnson's (1980: 5) definition of metaphor, also quoted by Murphy (1996: 178): "[t]he essence of metaphor is understanding and experiencing one kind of thing in terms of another". Lakoff (1987: xiv) expresses a similar view when he writes "[t]hought is *imaginative*, in that those concepts which are not directly grounded in experience employ metaphor, metonymy, and mental imagery – all of which go beyond the literal mirroring, or *representation*, of external reality" [emphases in the original]. Or consider Lakoff's (1993: 244) formulation of one of the main tenets of CMT: "Much subject matter, from the most mundane to the most abstruse scientific theories, can only be comprehended via metaphor". But elsewhere, we find a more cautious approach. Lakoff (1993: 245) states that "[m]etaphor allows us to understand a relatively abstract or inherently unstructured subject matter in terms of a more concrete, or at least more highly structured subject matter".[8] Lakoff and Johnson's (1980: 5) definition above gives rise to ambiguity if taken out of context. Below is the broader context:

> The essence of metaphor is understanding and experiencing one kind of thing in terms of another. It is not that arguments are a subspecies of war. Arguments and wars are different kinds of things [...] and the actions performed are different kinds of actions. But ARGUMENT is partially structured, understood, performed, and talked about in terms of WAR.

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[7] In fact, Murphy (1996) criticizes not so much what Lakoff and Johnson (1980) say as what they *would* say, because he hypothesizes conceptual representations not detailed in the criticized work. Since the nature of conceptual representation is not clear from CMT literature, Murphy (1996) establishes two compatible versions, a strong and a weak one.

[8] Strictly speaking, the structured-unstructured and highly structured-little structured oppositions are not consistently applied. The former implies a binary opposition, the latter does not.

In other words, experiencing the target domain directly and distinctly is possible, as is also shown elsewhere in the same book (Lakoff & Johnson 1980: 177).

> Though most of [human emotions, abstract concepts, mental activity, time, work, human institution, social practices, etc. and even physical objects that have no inherent boundaries or orientations] can be *experienced* directly, none of them can be fully comprehended on their own terms. Instead, we must understand them in terms of other entities and experiences, typically other *kinds* of entities and experiences. [emphases in the original]

It is also significant that Lakoff and Johnson (1980: 177) in this quote refer to full comprehension. In other words, metaphorically understood abstract concepts do have some impoverished nonmetaphorical structure, but this is insufficient for full understanding. What is not metaphorical about causation, for example, is that cause is a determining factor for a situation (state, change, process, action) (Lakoff & Johnson 1999: 177). The Invariance hypothesis (see 3.2.4 below) also presupposes that the target has some nonmetaphorical structure. In this respect, Murphy's (1996: 180-182) strong view is probably an extreme representation of CMT's claims. Subsequent writings provide further clarification. Lakoff and Johnson (1999: 134), for example, claim that

> [e]ach of these abstract ideas we will be discussing – events, causation, time, the self, the mind, and morality – turns out to be *largely* metaphorical. *Although each idea has an underspecified nonmetaphorical conceptual skeleton, each is fleshed out by conceptual metaphor*... [emphases mine]

Gibbs (2011: 535) also criticizes Murphy (1996: 114) in this spirit. Ruiz de Mendoza Ibáñez and Hernández (2011: 166) add that CMT actually claims that some aspects of the target domain can be understood in terms of some aspects of the source domain. What may have led to the criticism is the lack of clarity in the statements of early CMT literature and the emphasis on the extent of metaphoricity and absence of direct understanding, rather than on whatever literal skeleton is left of the target concept. Lakoff and Johnson (1999: 71-72) stress the interdependence of a concept such as love and the metaphors for the same concept and this fits in well with their philosophical approach.

Murphy (1996: 182) also has a weak view according to which the content and structure of the representation of abstract concepts is somehow causally influenced by the metaphor but the representation of itself is direct. McGlone (2007: 114) reiterates it, adding that no conclusive evidence has been found. Gibbs (2011: 537-543) rejects this criticism and lists a number of research findings to support his rejection.

Once the nature of source and target has been clarified, it is easy to see that the existence of multiple metaphors for the same target is not problematic. The impoverished structure of the target domain would enable several source domains to be mapped, each highlighting and hiding different aspects. Love is conceptualized in terms of a journey, physical force, illness, magic, etc. (Lakoff & Johnson 1999: 71). Several source domains may be needed, because concepts have several aspects that speakers want to understand (Kövecses 2010: 96). Since there is no identity between the source and target, even conflicting source domains can be used to highlight different properties of the target. Murphy (1996: 184-186) still disagrees. He believes that even if we hold only the weak version of CMT and assume the causal influence of metaphor, allowing several different source domains results in conflicting conceptualizations of LOVE or ARGUMENT, etc. For example, in a commercial transaction (LOVE IS A VALUABLE COMMODITY), the goal is to maximize profit, so the participants have opposing goals. This is contrary to the journey metaphor, in which lovers begin with the same

goal and work in concert (Murphy 1996: 186). Murphy (1996: 187) also comments on the idea of conceptual skeleton (see the Lakoff & Johnson (1999: 134) quote above).[9] "[T]he skeleton needs to be both extensive (to prevent incorrect inferences) and minimal (to allow metaphoric mappings). If one does not assume that information is represented metaphorically, then this paradox does not arise". Contradictory conceptualization, however, is possible. Thibodeau and Boroditsky (2011: 10) suggest that "people don't have a single integrated representation of complex issues like crime, but rather rely on a patchwork of (sometimes disconnected or inconsistent) representations and can (without realizing it) dynamically shift between them when cued in context".

The reverse situation of several source domains being mapped onto the same target domain is when many target concepts are conceptualized in terms of the same source. Ritchie (2013: 82-83) suggests that such cases could be generalized into generic metaphors such as X IS WAR or X IS A JOURNEY. Kövecses (2010: 137-138) handles similar examples by introducing the notion of main meaning focus. Each source domain is associated with a particular meaning focus, which is fixed and conventionally agreed-on in a community (Kövecses 2010: 138). The source domain BUILDING is associated with the main meaning focus "the creation of a stable structure for a complex system", and this is mapped onto the various target domains such as THEORIES, RELATIONSHIPS, CAREERS, COMPANIES, ECONOMIC SYSTEMS, SOCIAL GROUPS and LIFE (Kövecses 2010: 136-138). Similarly, FIRE contributes 'the intensity of the situation' meaning focus to the targets it is mapped onto, such as ANGER, CURIOSITY, LOVE, i.e. emotions, ARGUMENT or PRESSURE (Kövecses 2010: 140-144).

Both Ritchie's (2013) and Kövecses's (2010) solutions imply that the target domains may also share some features. Goatly (2007: 166) claims that because different targets may share the same source domain, they may become associated or interpreted as an equation. Thus, because GOOD (MORALITY/QUALITY), HAPPY and MORE can be conceptualized in terms of HIGH, there is an association between MORE and GOOD/HAPPY (MORE=GOOD/HAPPY). These associations, called "metaphorical equations", are not conceptual metaphors but strong cognitive associations (Goatly 2007: 164, 166). Goatly (2007: 166-167) is primarily concerned with revealing how metaphor can be used to influence thinking, often leading to unwelcome results, and illustrates the role of these metaphorical equations in social practice, such as the consumption of increasing quantities of food, or the economic thinking that producing more leads to happiness.

3.2.4 Mappings

Mapping of the source domain onto the target are regarded as unidirectional, going from the source to the target, and fairly fixed (Lakoff 1993: 245, Kövecses 2010: 7-10). In LOVE IS A JOURNEY the travellers correspond to the lovers, the vehicle is mapped onto the love relationship, the distance covered corresponds to the progress made, etc. (Kövecses 2010: 9). In SOCIAL ORGANIZATIONS ARE PLANTS, the growth of the plant corresponds to the development of the organization, the flowering is mapped onto the best or most successful stage, the fruits or crops are mapped onto the beneficial consequences, etc. (Kövecses 2010: 10).

[9] Lakoff apparently entertained this idea already in the mid 80s, since Murphy (1996: 187) refers to personal communication between Lakoff and himself.

CMT is attacked by critics who do not see systematicity in the mappings (Gibbs 2011: 535). In image metaphors only a single feature is mapped, but even ordinary conceptual metaphors do not exploit the full potential of the source domain. This partial mapping is additional support against the criticism that source and target are indistinguishable (see 3.2.3). Yet, it is a challenge to explain why certain mappings are absent. CMT can offer two solutions: the Invariance Hypothesis and complex metaphors (Gibbs 2011: 536). The latter are built out of more elementary primary metaphors and thus reflect mappings that those primary metaphors include. As was shown in 3.2.2, ARGUMENT/IDEA IS A BUILDING is a complex metaphor composed out of the primary metaphors ORGANIZATION IS PHYSICAL STRUCTURE and PERSISTING IS REMAINING ERECT (Grady 1997: 273). This explains why walls, ceilings, floors, windows or human occupants are not mapped (Grady 1997: 277). Gibbs (2011: 537) holds that primary metaphors cannot account for all the partial mappings, but they place limits on what can be mapped.

The other solution is the Invariance Hypothesis (Lakoff 1990, 1993). Metaphorical mappings preserve the cognitive topology (image-schematic structure) of the source domain, in a way that is consistent with the inherent, i.e. nonmetaphorical, structure of the target domain (Lakoff 1990: 54, 1993: 215). This principle was introduced to account for irregularities in the mappings. When you give someone a book in the source domain of transfers (of physical objects), the recipient possesses the object after giving, but in the target domain of actions, when you give someone a kick or a punch, no such object exists after the action is over (Lakoff 1993: 216).[10]

The previous section has shown that CMT is sometimes criticized for allegedly positing a very high degree of isomorphism between source and target domains that runs counter to the incongruity generally expected. Certain target domains do not seem to be very different from their source domains, if target domains have only vaguely construed inherent structures. In addition, Grady (1999: 85) draws attention to the basic, direct cognitive experience that characterizes many target domains of primary metaphors, e.g. STRONG DESIRE, MORE, ACHIEVING A PURPOSE. As mentioned above in 3.2.2, this means that many metaphors may have metonymic origins. The similarity of the two domains and the metonymic origin raise the question to what extent the relation between the two domains/concepts is metaphorical rather than metonymic or literal. Lakoff and Johnson (1980: 84-85) also note the difficulty of distinguishing metaphorical mappings from pure subcategorization: AN ARGUMENT IS A FIGHT may be treated as a metaphor or not. Could many of the proposed mappings end up not being metaphorical after all? CMT's view is summarized by Radden (2002): metonymic relations may underlie correspondences that later develop into metaphors, because the two domains are felt sufficiently incongruous and distant, which means that relationships between domains may occupy slots along a metaphor-metonymy continuum.[11] Yet, not all critics agree that the mappings reveal metaphorical links. In their review of Lakoff and Turner (1989), Jackendoff and Aaron (1991) raise the possibility that DEATH IS SLEEP or DEATH IS DEPARTURE are literal statements (death is a subtype of sleep/departure) based on the belief system of a given society. They also distinguish metaphor from conceptual parallelisms, whereby conceptual structure is organized in terms of a set of parameters that lead to parallel linguistic expressions denoting space and other domains, their equivalent of metaphors such as STATES ARE LOCATIONS, PURPOSES ARE DESTINATIONS, etc. Thus, *in* combined with a temporal word has its

[10] The principle was later refined by Ruiz de Mendoza and Hernández (2011: 180-180).

[11] Lakoff and Johnson (1980: 85) also refer to a continuum in their discussion of metaphor vs subcategorization.

spatial parallel (*in* + space word) or *in/out of existence* also has its spatial correlate (Jackendoff & Aaron 1991: 328-329). They argue that this is the only way these non-spatial meanings can be expressed, which echoes CMT's claims of the impossibility of direct literal understanding. Both McGlone (2007: 123) and Jackendoff and Aaron (1991: 326, 329) are unwilling to treat STATES ARE LOCATIONS, TIME IS MOTION , etc. as metaphors due to the lack of incongruity.

Alternatives to CMT cluster around property attributional and structure-mapping models, (Ritchie 2013: 37, 66, Kertész et al. 2012: 719-720, Bortfeld & McGlone 2001: 76, Vervaeke & Kennedy 2004: 224-225, McGlone 2007: 116-117). Attributional models view metaphor understanding as a search for properties of the vehicle that can be transferred to the target, so that in *Our love has been a rollercoaster ride* the properties 'exciting, scary, etc.' of rollercoaster rides are transferred to love, or in *Men are wolves* the properties 'fierce, etc.' are assigned to men (Bortfeld & McGlone 2001: 76, Ritchie 2013: 37). Structure-mapping analogical models focus on shared relational structure between vehicle and target, and the process begins with the alignment of the shared relation, such as *prey on* in *Men are wolves*, followed by the alignment of the other elements (wolves – men, animals (deer, sheep) – women) (Bortfeld & McGlone 2001: 76, Ritchie 2013: 29-30). CMT is closely related to the latter model (Bortfeld & McGlone 2001: 79). Bortfeld and McGlone (2001: 79-82) suggest that these models are complementary, not mutually exclusive, and readers have both mechanisms at their disposal, but certain factors may favour one or the other. Ritchie (2013: 38, 40) claims that the type of metaphor determines which processing model is applied. For invented and simple metaphors such as *Achilles is a lion* attributional models are perfect, while for more complex metaphors like *Love is war* structure-mapping analogical models are preferred (Ritchie 2013: 38). According to Bortfeld and McGlone (2001: 82) the priming effect of previous discourse may also influence readers, but both models can be accessed. While analogy is useful, many mappings (especially those based on correlations in experience) cannot be analyzed via structural analogy (Grady et al. 1999: 112).

A more recent version of the attributional model is the categorization (or class/category-inclusion) model, which hypothesizes that metaphors (*My lawyer is a shark*) are class-inclusion assertions, because on hearing them people identify the closest superordinate category of the vehicle and target (PREDATOR) and search for relevant properties of that category (vicious, aggressive, merciless, etc.) (Ritchie 2013: 43, Glucksberg 2008: 69, 71). Ritchie (2013: 44), however, claims that this theory cannot explain how we can find the supercategory in metaphors like *Sally is a block of ice*.

Gentner and Bowdle (2008: 116) attempt to unify the two models of category inclusion and structure-mapping in their career-of-metaphor hypothesis that claims horizontal alignment between the vehicle and the target (two literal meanings) for novel metaphors but vertical alignment between the target and an abstract category for conventional metaphors. Glucksberg (2008: 79-80) rejects this theory. In fact, each camp challenges the psycholinguistic findings of the other. Ritchie (2013: 61-63) pinpoints a weakness in both models: the attributes to be transferred or the abstract category can often be found only after some metaphorical mapping has taken place. "What certain *jobs* have in common with *being in jail* is not the fact of physical confinement, but an emotional response to the necessities of the job that resembles what the speaker imagines it would feel like to be in jail" [emphases in the original] (Ritchie 2013: 62). Ritchie (2013: 73-74) claims CMT is capable of solving this problem by tracing many mappings to correlations in physical experience that produce neural connections. The discussion in 3.2.2 has revealed that not all metaphors are grounded in bodily experience, but

if the body is treated on a par with culture, the same neural connections will occur in a large number of cases.[12]

CMT presupposes a binary relationship between two domains or concepts. However, the alternatives above suggest that a third notion may also be needed that guides the analogies established in the structure-mapping model or shapes the abstract category in the category-inclusion view. Blending theory (BT), also called conceptual integration, attaches more importance to this third entity (and also introduces a fourth one) (Fauconnier & Turner 1998). The entities involved are mental spaces or input spaces, and this is not merely a terminological difference from CMT. Whereas the latter posits two mental representations (domains), analyzes metaphor as directional and usually focuses on entrenched, conventional relationships, BT posits more than two mental spaces, does not assume directionality from "source" to "target" and often focuses on novel conceptualizations, capturing their dynamic and ephemeral aspect (Grady et al. 1999: 101). There are, however, a number of conventional idioms that can be regarded as blends only, such as *button one's lip*, *a storm in a teacup*, etc., showing that short-lived blending processes may become entrenched in long-term memory.

Blending is thought to underlie not only metaphorical expressions such as *The Grim Reaper*, *dig one's own grave* or *This surgeon is a butcher* but also analogical counterfactuals (*In France, Watergate would not have harmed Nixon*), the concept of the desktop, and even literal language such as *Sally is the daughter of Paul* (Fauconnier & Turner 1998: 149, 151, 156, 169, Grady et al. 1999: 103, 119). The blending motivating *This surgeon is a butcher* has two input mental spaces (SURGERY and BUTCHERY), a generic space that contains whatever shared structure the input spaces have (agent, undergoer, sharp instrument, work space, procedure) and the blended space that inherits elements from the input spaces (Figure 1; elements of the spaces and projections are not shown) (Grady et al. 1999: 104-105).

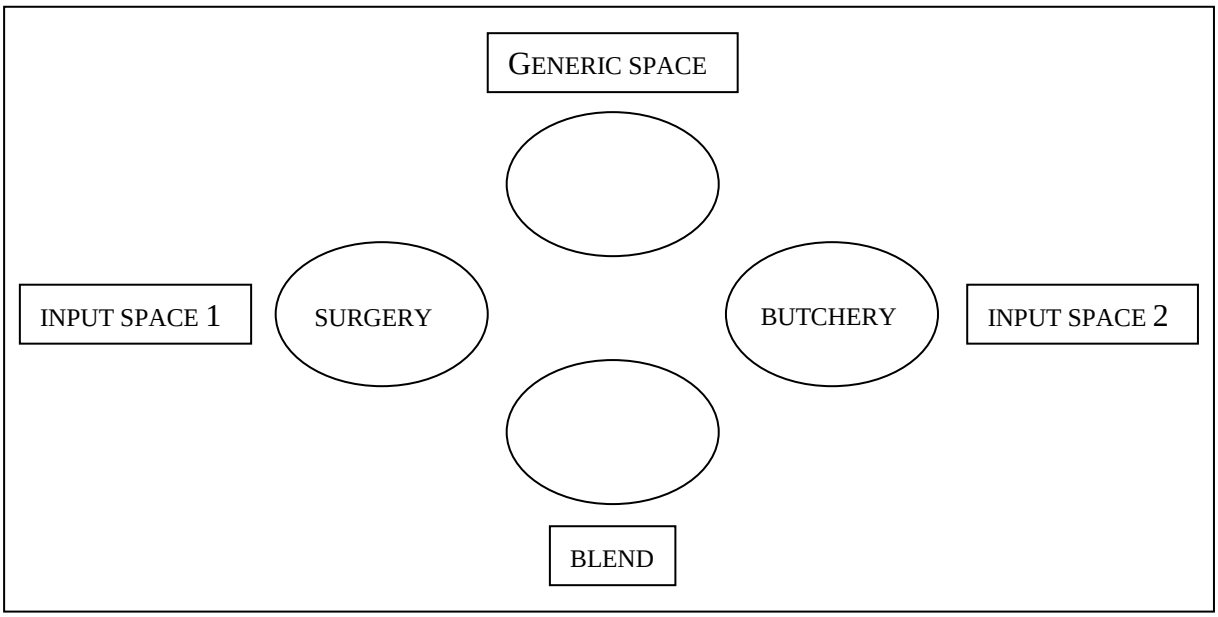

Figure 1: This surgeon is a butcher

[12] The idea of including culture is not alien to CMT, see Kövecses (2010: 85, 187).

Blending is common is pictorial and multimodal metaphors (see Figure 2 below, taken from Nield (2012)). The picture in Figure 2 is used as an illustration of a web article entitled *40 ways to fix your PC before you call an expert* and shows a woman who is about to hammer her laptop into pieces as a means of trying to fix it. It is a blend of two input spaces. One input space is a computer user's reaction to encountering technical difficulties (a fairly common real-life scenario), the other input space is taken from a well-known science-fiction film *2001: A Space Odyssey*. In the film, an astronaut called Dave is trying to disconnect a malfunctioning super-intelligent computer. When he finally manages to start the deactivation process, the computer is imploring him to stop (http://en.wikiquote.org/wiki/2001:_A_Space_Odyssey_(film)):

> Dave, stop. Stop, will you? Stop, Dave. Will you stop, Dave? Stop, Dave. I'm afraid. I'm afraid, Dave. Dave, my mind is going. I can feel it. I can feel it. My mind is going. There is no question about it. I can feel it. I can feel it. I can feel it. I'm a... fraid. Good afternoon, gentlemen. I am a HAL 9000 computer. I became operational at the H.A.L. plant in Urbana, Illinois on the 12th of January 1992. My instructor was Mr. Langley, and he taught me to sing a song. If you'd like to hear it I can sing it for you.

In the blended image in Figure 2, the laptop-computer is addressing a woman and the original words of the film are therefore modified, the male name *Dave* is replaced by *Davina*. In the real-life input space the laptop does not talk, and in the film there is no laptop and the actual words uttered are slightly different (Dave vs Davina). The woman's method of fixing the laptop-computer is physical destruction, while normally you would probably try other, less invasive means, and the means adopted by the astronaut in the film is disconnection by removing hardware components from the memory of the computer using a tool that looks like a screwdriver. There is a parallel between the two input spaces in that both humans use a mechanical tool to fix a faulty electronic device (all this is included in the generic space). One of the oddities of Figure 2 is that the woman has chosen an inappropriate means to achieve her purpose. But how do we know that she wants to heal the laptop rather than destroy it in the first place? The title of the article and its subject matter suggest that what she wants is to repair her laptop.

Figure 2: Blending a film scenario with real-life human action

The picture can be interpreted in several ways. It may suggest that to non-experts an electronic device seems to have a mind of its own, necessitating drastic measures before it takes control over them (i.e. before the computer or laptop reaches "the point of no repair").[13] In the film, the human being wins, and the reader might therefore conclude that the use of the hammer is justified, a conclusion that only works in the blend, because the life-threatening consequences of the malfunctioning computer are projected from the film input space. Taken together with the text of the article, the picture may say that non-experts frequently misjudge the appropriate ways of fixing software/hardware problems (perhaps because they sense a bigger threat than the actual threat the machine poses) and that there are a number of ways to try before you lose patience and hit the ceiling (and then the computer), i.e. before you resort to drastic measures.

The relationship between BT and CMT can be regarded as complementary or contradictory (Kövecses 2010: 302, Grady et al. 1999: 120). BT has grown out of a critical approach to CMT to offer a better analysis of some metaphors that did not fit CMT (Grady et al. 1999: 103). *This surgeon is a butcher* is a case in point. In the blending model there is partial projection from the input spaces, in this example the goal of healing is projected from surgery but the means is projected from butchery, and this conflict can explain why the sentence implies incompetence (Grady et al. 1999: 104-106).

Kövecses (2010: 272-277) illustrates further advantages of BT. He argues that the notion of generic space is useful, because it captures generalizations of a certain submapping (i.e. correspondence) (Kövecses 2010: 276). For example, in COMPLEX SYSTEMS ARE BUILDINGS, one of the correspondences is between the action of building and the action of creating a complex system, which has been generalized into the mapping of building onto the creation of anything, in other words "a generic space is created", and the metaphor CREATION IS BUILDING can be used for other than complex systems: you can build reputation or self-confidence. The same applies to the original mapping of foundations (of a building) onto the basis of a complex system. It has been generalized into BASIS IS FOUNDATION and can now be used for concepts outside complex systems, such as increase or change (*the foundations were laid for more far-reaching changes*) (Kövecses 2010: 276). The idea of generalization is plausible, but there are some problems. First, we need diachronic evidence to support it. If the metaphorical use of words such as *build*, *foundations*, etc. related to complex systems predated the metaphorical use of the same words unrelated to complex systems, then we can conclude temporal priority. Second, in the cognitive architecture of CMT, there is no "generic space" accompanying the source and target domains. We could modify CMT and claim that the commonalities extracted from the source and target can be found in a third "domain", and this is the generic space, but then all conceptual metaphors will have a generic space with potential for generalization. In fact, Langacker (2000: 40-42) has tried to synthesize blending and metaphor by adding a schema to the source and target. The schema consists of "an abstract commonality which motivates the extension" (Langacker 2000: 41). However, the schema has a different status from the source and target. As Langacker (2000: 41) explains, "it need not be salient or separately apprehended, and may have only fleeting occurrence as an implicit facet of the categorizing event". A hybrid domain is also posited, where the target is construed against the background of the source (Langacker 2000: 42). This implies that blending and metaphor are similar mechanisms along the literal–metaphorical continuum. Since blending is also thought to underlie literal language, it can be viewed as a general mechanism that

[13] This is also supported by the subtitle, the first part of which reads "Windows can be scary place if you're no computer expert and your PC goes wrong" (Nield 2012).

includes as one of its subtypes the metaphorical blend, whereby the input spaces come from different domains linked by counterpart connections (Grady et al. 1999: 110-113). Blending may better capture the dynamic aspects of meaning creation and "a sentence like [*This surgeon is a butcher*] probably draws on conventional associations with the word *butcher*, and the blending analysis may really be an account of the historical derivation of such usages, rather than of the on-line processing a hearer might use today" (Grady et al. 1999: 106). Though working with the attributive categorization model, McGlone (2007: 117) also claims that *butcher* is a conventional metaphor for 'incompetent, bungling people'. I checked the word in online AmE dictionaries and found that the verb *butcher* in this sense is established and conventional, but the noun *butcher* has no corresponding sense according to *Oxford Dictionaries*, *Collins American English Dictionary*, *Random House Dictionary*; however, the nominal sense is also established according to *Merriam-Webster Dictionary* and *American Heritage Dictionary of the English Language*.

The ideas in the previous paragraph lead to the possibility of adopting various theoretical models to analyze different types of metaphor. In an effort to test which model fares better, the butcher example is "dissected" by Kövecses (2011b) in a detailed analysis in the framework of the categorization model, the "standard" CMT, BT, the neural theory of metaphor and a revised version of CMT based on the idea of main meaning focus. He concludes that no single theory explains everything about meaning construction (Kövecses 2011b: 22).

There are critics who deny that blending is an improvement on and superior to CMT and reject BT as well. As with early CMT, ignoring the socio-cultural aspect is one of the charges against the blending model (Glebkin 2013: 2407). Glebkin (2013: 2407) argues that people digging their own graves at gunpoint in the first quarter of the 20th century was so shocking that it was metaphorically mapped onto other domains. Yet, a metaphorical mapping cannot explain why the forced digging in the source domain becomes a voluntary financial "digging", as Glebkin (2013: 2407) himself admits.

Another point of criticism is the lack of psycholinguistic evidence (Glebkin 2013: 2408). Coulson and Van Petten's (2002) as well as Yang et al.'s (2012) findings support BT, but Coulson and Van Petten (2002: 960) note that "although blending theory provides a ready definition of literal mappings as falling midway between literal and metaphoric language, it is quite possible that other models of metaphor comprehension would provide convergent definitions". Psycholinguistic studies of blending are still in their infancy.

A further critical remark concerns the presumed complexity of cognitive processes. Proponents of BT argue for the hidden complexity behind simple looking processes, while critics find BT overly complicated. Fauconnier and Turner (2008) belong to the former group. They show that the TIME IS SPACE metaphor conceals an elaborate system of conceptual integration mechanisms, and the simplicity of the SPACE to TIME mapping is deceptive (Fauconnier & Turner 2008). A metaphorical view cannot explain why, for example, some temporal units have a different speed than other temporal units (*Minutes are quick but hours are slow*), since the components of a moving object have the same speed in space (Fauconnier & Turner 2008: 55). Others regard blending as unnecessarily complex. Glebkin (2013), Ritchie (2004) and McGlone (2007) explain some of the examples of BT assuming simpler conceptual mechanisms. Harder (2003: 92-95) also warns that blending may work for complex cases, but it should not be applied to simple cases. He cites psycholinguistic research that shows children under the age four are unable to distinguish the green colour of a cat and the black colour of the same cat covered with red filter so that it looks black (Harder 2003: 93). Ritchie (2004) responds that the green cat experimental setup may have been artificial

and unfamiliar, and that "very young children seem quite capable of distinguishing between a doll (*toy baby*) and a real baby, a stuffed animal (*toy puppy*) and a real animal, etc., even as they construct elaborate play scenarios and carry on apparent conversations with these toys". Harder (2003: 94) also believes that, while some examples such as *fake gun* require a blending analysis with multiple input spaces, others allow a simpler explanation. To interpret *black gun*, you can add the property black without interfering with the "gunhood" of the gun, so you can stay within the same space. However, in an insightful analysis Tribushinina (2011) shows how even "simple" adjective-noun combinations such as *red house* are based on the integration of various input spaces.

3.2.5 The linguistic level

CMT has been criticized, especially in the early stages, for ignoring the detailed linguistic level, which shows various complexities or irregularities in the mapping mechanisms (Gibbs 2011: 535). This criticism has come from corpus linguists, discourse-centred scholars and phraseologists. Just as CMT has responded to criticism concerning the role of culture (see Dirven et al. (2001)), it has also started to incorporate corpus linguistic findings and devote more attention to discourse. Evidence comes from various corpus- and discourse-oriented volumes, such as Cameron and Maslen (2010), or Stefanowitsch and Gries (2006).

The basic tenets of CMT and the relatively fixed mappings from source to target predict a large amount of regularity in the linguistic expressions used, but analyses of natural texts can only partially confirm this (Deignan 2005: 211-212, Stefanowitsch 2006a: 6-10). For example, the source domain LIGHT is significant in conceptualizing HAPPINESS, but the opposite source domain DARKNESS has a minor role in the target domain SADNESS (Stefanowitsch 2006a: 7). Irregularities can also be observed at the level of lexical and grammatical patterns. For instance, the word *price* is associated with partly different collocates in its literal and metaphorical senses and many words used metaphorically tend to develop semi-fixed or fixed lexico-grammatical patterns (Deignan 2005: 206-209, 219). It is hypothesized that the use of prefabricated chunks and patterning help avoid ambiguity and help the hearer process utterances efficiently (Deignan 2005: 212, Stefanowitsch 2006a: 8) Pressures at the linguistic level combine with language driven by embodied conceptualization, culture and ideology.

Phraseologists such as Dobrovol'skij and Piirainen (2005: 142) feel that CMT's focus on the commonalities shared by many idioms is unhelpful in discovering the irregularities. They highlight the significance of studying cultural symbolism and the rich image behind the idiom. For example, the wolf is a cultural symbol of poverty, economic despair, among other things, and this contributes to the motivation of *keep the wolf from the door* (Dobrovol'skij and Piirainen 2005: 339). A similar Hungarian example is *malaca van* [literally 'have a pig'] 'have luck, be lucky', where the pig is a symbol of luck. As mentioned in Section 3 above, *split hairs* or *throw the baby out with the bath (water)* are motivated at the basic level of rich images rather than conceptual metaphors (Dobrovol'skij & Piirainen 2005: 90-91).

Discourse studies of metaphor have revealed that metaphor is more dynamic than presupposed by CMT. Certain metaphors emerge in a relatively stable form as discourse unfolds, conveying not only ideational meaning but also affective meaning (Cameron & Deignan 2006).

4 Conclusion

The title refers to two possible attitudes one can adopt with respect to CMT. Is CMT a promising approach that is worth defending or should we be noncommittal, sitting on the proverbial fence, waiting for conclusive convergent evidence to arrive to see which way we should jump? I am generally supportive of CMT and regard the integration of cultural, corpus and discourse studies as a welcome development.

I have pointed out that some early criticism of CMT was due to the lack of clarity of some statements and the little attention that was devoted to (cross-)cultural and linguistic aspects, though the first hints of complexities can be found in Lakoff and Johnson (1980) already. The emphasis of (early) CMT on abstract thought being dependent on embodied metaphorical conceptualization seemed to suggest a reductionist view and drew criticism from various scholars (Murphy 1996, Vervaeke & Kennedy 2004, McGlone 2007). CMT will probably be enriched as various strands of research and alternative models complement each other. At the same time, the explanatory power of CMT is still somewhat limited, because it is more suitable for explaining the regularities but often needs alternative models to account for lexico-syntactic restrictions and idiosyncrasies. I had better stay close to that fence.

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