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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

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[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

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[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]

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[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

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[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

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[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

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[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*.

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[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.

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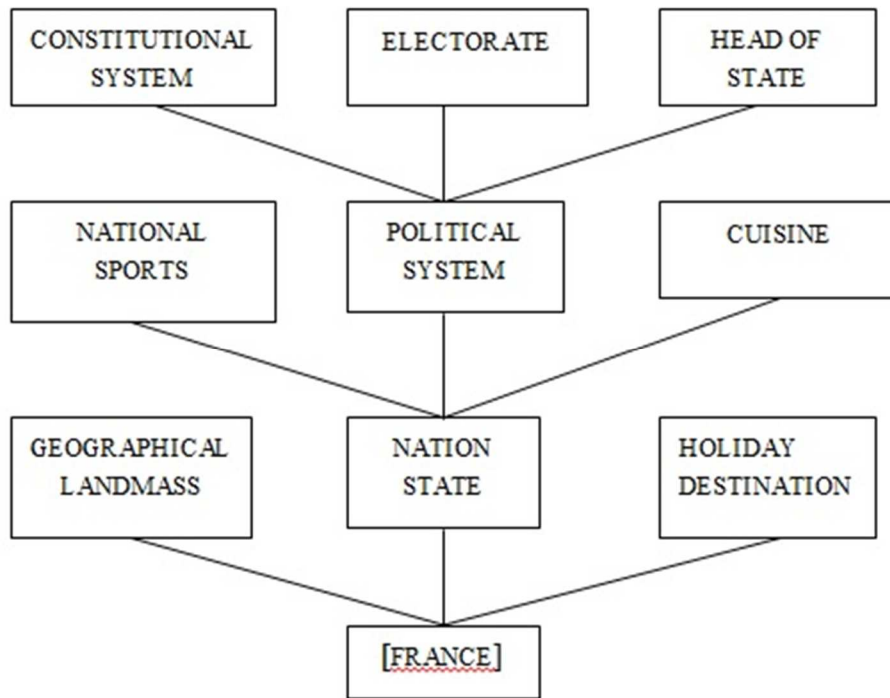
Figure 1: Partial cognitive model profile for [FRANCE].

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

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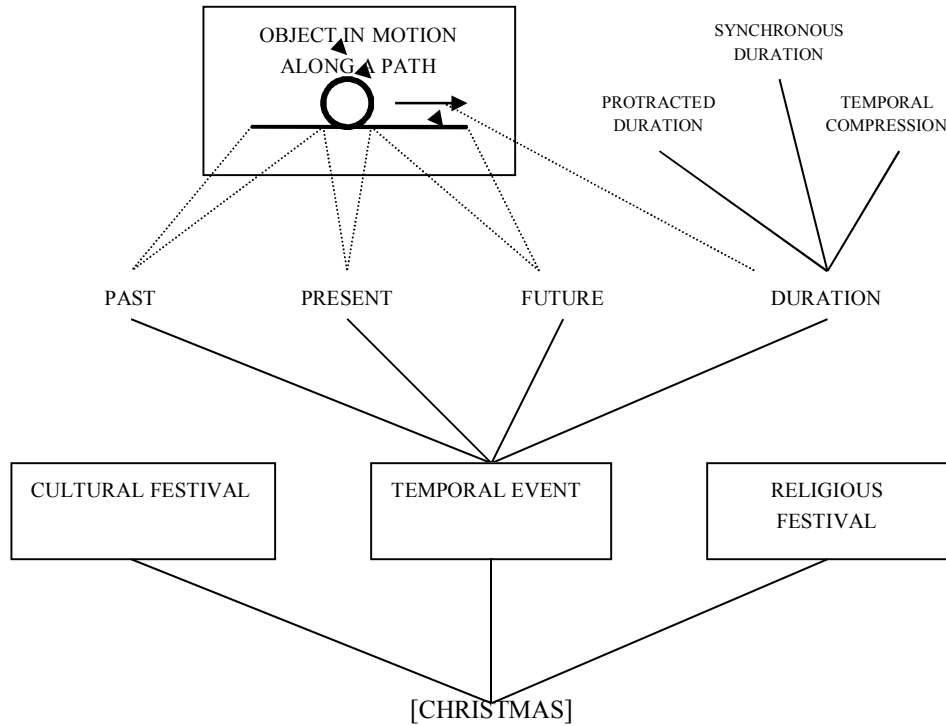
Figure 2: Partial primary cognitive model profile for [CHRISTMAS].

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.

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

```
                                   ┌─────────────────┐
                                   │   IMMINENCE OF  │
                                   │  OCCURRENCE OF  │
                                   │      EVENT      │
                                   └─────────────────┘
                                            │
                                            │
┌──────────────┐    ┌──────────────┐   ┌──────────────┐
│    TARGET    │    │   DIRECTED   │   │  IMMINENCE OF │
│   LOCATION   │    │  MOTION OF AN│   │  ARRIVAL OF   │
│              │    │    ENTITY    │   │    ENTITY     │
└──────────────┘    └──────────────┘   └──────────────┘

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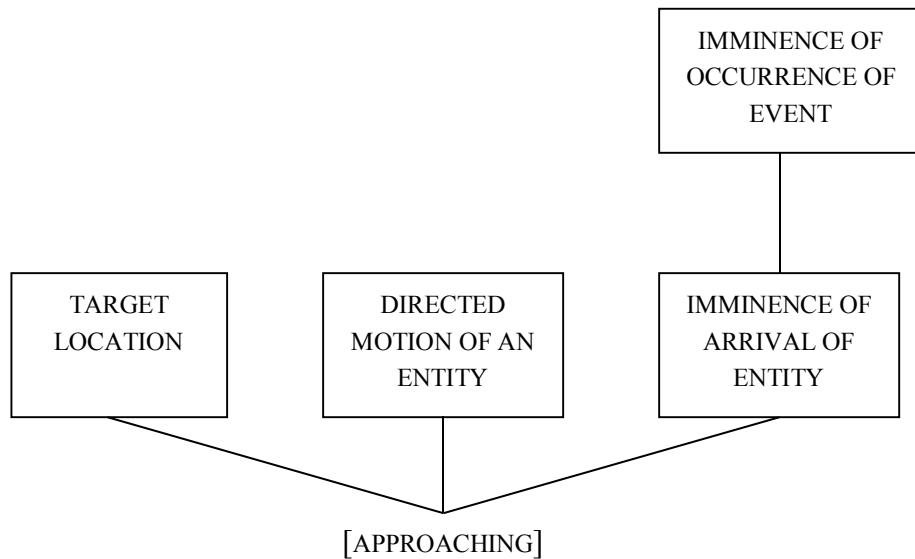
Figure 3: Partial cognitive model profile for [APPROACHING].

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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