# Metaphor, lexical concepts and figurative meaning construction

**Vyvyan Evans**
**Bangor University**

*Abstract*
This paper addresses the status and significance of conceptual metaphor as an explanatory theoretical construct in 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 and 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 metaphors—*discourse metaphors*—which emerge and evolve in and through language use, and inhere in the linguistic system. Indeed, the cognitive units associated with discourse metaphors, and other linguistic expressions, I refer to as *lexical concepts*. I also introduce LCCM Theory (Evans 2009b, 2010b), 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 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 to both 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 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 publication of *Metaphors We Live By* in 1980, 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 tended to, 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. However, it has become clear that CMT is in fact addressing a type of phenomenon that, in large measure, hadn't been studied or even recognised previously. And in contrast, a large set of figurative language data that are dealt with in various other traditions, including philosophy of language, and psycholinguistics are barely addressed by conceptual metaphor researchers. One of my aims, therefore, in the present paper, addressed in some detail in section 2, is to tease out what is special about conceptual metaphor, and to also show 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 of the paper I examine the claim that conceptual metaphor drives these processes, and argue, on the contrary, that usage-based issues play a more central role. In fact, I argue that conceptual metaphors do not directly motivate language use in an isomorphic way. That said, that 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 and Turner 2002). Another key issue relates to the role that language itself 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 (e.g., Evans 2006, 2009b, 2010b), plays in modelling the contribution of conceptual metaphors, other conceptual representations and language in metaphor interpretations. I have suggested elsewhere (Evans 2010b) 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 an overview, the three main sections of the paper, detailed below, make three specific claims. These I summarise here:

• 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 representations independent of conceptual metaphors (and other representations which inhere in the conceptual system). These I refer to as *lexical concepts*[2] (e.g., Evans 2006, 2009b, 2010b). 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 generalised theory of conceptual integration. That is, recognising 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

[1] See Zlatev (In press) who makes a similar point.

[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) for further details on the distinction between the linguistic and conceptual systems.

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 generalised theory of conceptual integration.

## 2. Conceptual metaphors versus discourse metaphors

In this part of the paper 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 be adopting and nuancing 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 in order 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 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 couldn't 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 that is 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 and Johnson (1980), Lakoff and Turner (1989), and Lakoff (1993), there was a tendency to claim, or at least suggest, that linguistic metaphor in toto was a consequence of conceptual metaphors. A conceptual metaphor, in this early work, was conceived 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.

[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.

Evidence for the existence of conceptual metaphor, until relatively recently, came primarily from language. The following examples, that derive from Lakoff and 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 our 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 our long-term memory.

What these mappings do is that they 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 we have 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, progress we make in resolving these difficulties, and in developing the relationship. We also have 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 we might have for the relationship.

Similarly, Lakoff and Johnson contend that we 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, our decisions about the direction and the route to be taken, and our 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 we understand lovers in terms of travellers. Similarly, the love relationship itself is structured in terms of the vehicle used on the journey. For this reason we 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 we have knowledge of the sort specified by the conceptual metaphor stored in our heads. If this were not so, we wouldn't be able to understand these English expressions: to understand lovers in terms and 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 summarises 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. And it is because of this we 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*. Moreover, 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 (e.g., Miller, 1979; Ortony, 1979; Tversky, 1977). Moreover, 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 and Malgady, 1979; Malgady and Johnson, 1976; Marschark, Katz, and Paivio, 1983) as well as the processing time required to understand a linguistic metaphor (Gentner and Wolff, 1997).

However, Lakoff (1993), and his various collaborators, including Mark Johnson (Lakoff and Johnson 1980), and Mark Turner (1989), argued vociferously against explanations for linguistic metaphor based on similarity. After all, when we

conceptualise love in terms of journeys, there is nothing objectively similar about the two. Moreover, if two things are similar then, in principle the tenor and vehicle should be equally adept at being deployed to understand the other. That is, we would expect to find a symmetric or bidirectional process, along the lines advocated by Black (e.g., 1979) for instance, in his interactional theory of metaphor. However, as Lakoff and Johnson, and Lakoff and Turner showed, expressions relating to love and journeys are not asymmetric in this sense. After all, while we can describe two newly weds as having started on their journey, and be understood to be referring to the commencement of their married life together, we cannot refer to people starting out on a car journey as having just got married, and be understood to be referring to the car journey itself.

In point of fact, central to the CMT account is the claim that conceptual metaphors are asymmetric, as reflected by the directionality of the arrows in Table 1, directed from the source domain to the target domain. And crucially, according to Lakoff, Johnson and Turner, what motivates the emergence of a conceptual metaphor, rather than being similarity, is the nature of embodied experience. That is, 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, and indeed are instance of, purposeful activities, the more specific 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 metaphors is formalised in terms of the theoretical construct known as a *primary conceptual metaphor*, or *primary metaphor* for short (Lakoff and Johnson 1999; Grady 1997a, 1997b). Primary metaphors are hypothesised to be directly grounded in experience, arising from experiential correlations. Moreover, primary metaphors can be unified (via the process of conceptual blending, see Grady 1997b, 2005) giving rise to compound (or complex) conceptual metaphors, of which LOVE IS A JOURNEY is claimed to be 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. Hence, LOVE IS A JOURNEY is vicariously grounded in experience too, but the grounding is not direct as in the case of primary metaphors.

In the most recent version of CMT, Lakoff argues for a neural perspective on conceptual metaphor (e.g., Lakoff 2008). He proposes that primary metaphors arise via mechanisms of Hebbian learning: correlations in experience give rise to correlated firing of neurons, and 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*), and so on, naturally arise, cross-linguistically. They do so as they form fundamental recurring 'units' (*primary scenes* in the parlance of Grady 1997a) of human experience.

### *2.2. Correlation vs. Resemblance*

While many linguistic metaphors do indeed appear to be the result of conceptual metaphors, in the sense provided in the previous subsection, there is a large set of figurative language expressions that don't appear to relate to a system of mappings, in contrast to compound metaphors, such as LOVE IS A JOURNEY (see Table 1). Moreover, 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
.

There are a range of linguistic metaphors 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 us to think of his wife's waist in terms of an hourglass.[4]

In their 1989 book *More Than Cool Reason*, George Lakoff and Mark Turner provided an attempt to apply the core insights of CMT to poetic metaphor. Yet Lakoff and Turner were, 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. After all, 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 above to be accounted for?

The solution was something of a fudge. Lakoff and Turner conceded that linguistic metaphors of the sort apparent in *Free Union* were not grounded in experiential correlation. In fact, 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 also attempted to retain parts of the CMT account. They did this by claiming that image metaphors still involved a conceptual metaphor. However, the nature of the conceptual metaphor process was a 'one shot', i.e., a single mapping, involving structuring the target concept asymmetrically in terms of the source. One difficulty, however, for such an account is that it cannot exclude a bidirectional 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. But 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 in order 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 involve 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—involving a single mapping between two concepts—is not plausibly motivated by recurring and ubiquitous correlations in experience. This begs the question as to how to account, in a principled way, for the apparent disjunction between image metaphors on one hand, and primary metaphors

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

on the other, while attempting to retain a 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, there is an additional class of linguistic metaphors that pose potential difficulties for the CMT account. These include, for instance, those linguistic metaphors that are associated with the predicate nominative form, that have traditionally been studied in the literary and philosophy of language traditions. Examples include the following:

(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 with examples of this type for CMT, as well as the image metaphors discussed above, is maintaining that linguistic examples of this sort have an experiential basis. Sometimes they may plausibly have, as in the following:

(4) Sally is a block of ice

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

However it is less clear how other sorts of examples that share this form might be motivated by experiential correlation. To make this point 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, and perhaps easily manipulated. For this example to have an experiential basis, in the sense of CMT, the boss would have to be consistently seen with a cat. It is a recurring and inevitable co-occurrence—a correlation—which, recall, provides a conceptual metaphor—held to motivate a 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 a 'pussycat'.

With characteristic insight, Joseph Grady, a former student of George Lakoff, and the pioneering force behind the notion of primary metaphor, recognised that conceptual metaphor could not be maintained as providing an account for all types of linguistic metaphor (Grady 1999). In point of fact, he observed that the linguistic metaphors of the sort captured in (3) appear not to have the same basis as primary metaphors and conceptual metaphors that seem to invoke primary metaphors, namely compound metaphors such as LOVE IS A JOURNEY. To account for this observation, he invoked a distinction between what he referred to as metaphors based on *correlation*, and those which are based on what he termed *resemblance*. In so doing, Grady was saying something more in keeping with the received view so roundly criticised 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'. Moreover,

image metaphors might then be seen as also involving resemblance, the resemblance in question being perceptual rather than functional.

In sum, Grady effectively concedes that a (presumably large) subset of linguistic metaphors are, in fact, not motivated by conceptual metaphors: those that are grounded in experience and hence correlational in nature. This conclusion is important in at least two ways. Firstly, it asserts that the claim that conceptual metaphor is 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. And secondly, far from undermining CMT as a theory, it demonstrates the following. CMT successfully identified a type of linguistic metaphor that had not been previously studied in a systematic way. Metaphors of this kind, as evident, for example, in (1) above, 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 shall prefer, discourse metaphor—I shall argue that resemblance metaphors are a subset of discourse metaphors.

It is often suggested, in the literature, that conceptual metaphors are automatically activated during language use. Moreover, 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* as in *a long time*, this demonstrates that the conceptual metaphor, DURATION IS LENGTH is alive and well. In the last decade, psycholinguistic and psychophysical behavioural evidence has begun to accrue which provides some highly suggestive empirical support for this view.

The paradigm case study for investigating the psychological reality of conceptual metaphor in the experimental psychology literature is space to time mappings. And recent evidence has begun to suggest that some aspects of time is indeed structured in terms of space,. Some important experimental support is reported in McGlone and Harding (1998), Boroditsky (2000) and Núñez et al. (2006). However, the perhaps most telling study to date in this area is that reported in Casasanto and Boroditsky (2008). In their study, Casasanto and Boroditsky employed a 'growing lines' experimental paradigm, in which lines would '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 growing lines. Casasanto and Boroditsky found the subjects evaluations of spatial extent are not influenced by duration, while evaluations of duration are influenced by spatial extent. In other words, the space to time mapping is asymmetric in the way predicted by CMT. Perhaps more importantly for the present point: the conceptual metaphor is automatically activated, and, in the experiment being discussed here, is activated in the absence of language. Put another way, subjects cannot help activating spatial representations when performing temporal processing. This finding does appear to support the view that conceptual metaphors are automatically activated, and highly entrenched in the conceptual system as claimed by Lakoff and Johnson.

But now let's consider discourse metaphors. As we have already seen, there is a varied class of linguistic metaphors, including so-called 'image' metaphors, as well as those associated with the predicate nominative 'X is a Y' form, as well as lexical blends, e.g., *frankenfood* (Zinken 2007) which appear not to be grounded in experience in the sense claimed by CMT. These 'resemblance' metaphors I dub

discourse metaphors.[5] (e.g., Zinken 2007). I do so as the key property associated with metaphors of this kind is that they appear to be contingent upon language use. They arise in order to facilitate communicative intentions, and, consequently can evolve over time, either becoming highly entrenched lexical 'metaphors' or dropping out of use altogether. Hence, unlike conceptual metaphors, discourse metaphors appear not to be independent of language, they arise in the context of language use.[6] And, unlike conceptual metaphors, they are not stable, but rather evolve, as mediated by the ways and contexts in which they are deployed.

To take one example, consider the lexical metaphor: *frankenfood*. This term was first used in the mid 1990s, particularly in Europe, and was propagated by NGOs such as Friends of the Earth, in response to the perceived dangers of foodstuffs that made 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. And when that function is no longer required, the discourse metaphor may disappear from use.

Another example of how discourse metaphors are influenced by use relates to the following. Discourse metaphors can become lexicalised and so reanalysed as having a different semantic function from the one that they originally arose to signal. A clear example of this is the metaphoric use of the word *tart*. This was originally applied, in the 19th 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 specific 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* can now be applied widely to express a negative assessment of fidelity in a range of different semantic fields. For instance, an attested recent example in the British national press is the use of the expression *credit card tart*, referring to a consumer who serially switches from different credit card companies in order to gain the best interest rate, introductory interest free offer and so on, on their credit card. This example demonstrates that, one consequence of use on discourse metaphors is that 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. However, as they become better established they appear to take on a more generic meaning, which corresponds to them becoming more entrenched. Glucksberg and Keysar (1990) and Glucksberg (2001) have argued, based on this observation, that what I am referring to as discourse metaphors in fact behave like lexicalised categories: a tart is a paradigm example of a particular category, a person whose fidelity is unreliable in any sphere.

In recent work, Bowdle and Gentner (2005) have put forward a hypothesis, the Career of Metaphor Hypothesis, that captures the observed trajectory for what I am referring to as discourse metaphors. They propose that discourse metaphors exhibit a cline in terms of conventionality, following an evolutionary 'career' reflecting their usage. When a new discourse metaphor first emerges it is highly novel. Bowdle and Gentner propose, following Gentner's Structure Mapping hypothesis (Gentner 1983; Gentner et al. 2001), that discourse metaphors are motivated by establishing an

[5] While the term 'discourse metaphor' was introduced into the literature by Zinken (e.g., 2007), my use of the term departs from Zinken's somewhat narrower definition.

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

analogical relationship between one idea and another. In other words, discourse metaphors facilitate projection of a system of relations from one domain onto another domain, 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 lexicalised. One consequence of this is that, at the conceptual level, the structure mapping operation closes down (which in contrast with conceptual metaphors, for instance, remains active in the conceptual system). Another is that the lexicalised discourse metaphor takes on more abstract properties, serving a reference point for a particular category of things.

To illustrate, take the word *roadblock* considered by Bowdle and Gentner. They make the following observation: "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." (Ibid.: 2005: 198).

There is empirical support for the Career of Metaphor Hypothesis. A robust finding in metaphor comprehension studies is that conventional metaphors are understood more quickly than novel metaphors (e.g., Blank 1988; Coulson 2008; Giora 2008). This is only to be expected if the Career of Metaphor Hypothesis is correct. After all, once discourse metaphors have become lexicalised, they become 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, in order to facilitate a linguistically-mediated communicative intention. They are facilitated, initially, due to generalised analogical processing at the conceptual level. However, the inferences that arise from this process become lexicalised as part of the lexical concept associated with the discourse metaphor form, and become 'detached' from the conceptual system. This process of reanalysis 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. Hence, discourse metaphors evolve from novel analogies to lexicalised units which 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 position. While conceptual metaphors are clearly important in language processing, as empirically verified by a range of behavioural studies (e.g., Boroditsky 2000; McGlone and Harding 1998; Gentner et al. 2002), conceptual metaphors are not the whole story. Indeed, as I argue below, it is difficult to maintain that conceptual metaphors are solely responsible for figurative language,. More specifically, in this section I show that conceptual metaphors do not motivate figurative language in a direct way. Rather, while they have a constraining influence on linguistic expressions, language represents a semiotic system that, in principle, is distinct from the conceptual system, the venue for conceptual metaphors. The linguistic system (as discussed further below), is subject to language-internal pressures that give 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 (Evans 2006, 2009a, 2009b). While conceptual metaphors may have, in part, a constraining influence on the nature of lexical concepts, nevertheless, lexical concepts operate independently to conceptual metaphors. Hence, usage patterns in language are not strictly 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, actually underdetermine the linguistic metaphors that
show up in language use. For instance, consider the conceptual metaphor
STATES ARE LOCATIONS. It has been claimed in the CMT literature that this conceptual 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*, canonically relate to spatial relations of particular kinds, it is due to the 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, this 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 can ordinarily co-occur with *in*, *at* and *on* are actually constrained. For instance, while we can be *in* love, shock, pain or trouble, the semantic arguments that collocate with *at* and *on* are unacceptable when applied to *in*, as demonstrated below, and signalled by the 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 does so in preposition-specific (=form-specific) ways. Let's take *in* and *on* by way of illustration, as exemplified in the examples below:

(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* appear to encode abstract states, the kinds of states they can encode appears to be of quite different kinds, as evidenced by the range of object arguments they can take. For instance, the semantic arguments that *on* selects for relates to states which normally hold for a limited period of time, and which contrast with salient states in which the reverse holds. For instance, being *on duty* contrasts with being *off-duty*, the normal state of affairs. Equally, being *on sale* is, in temporal terms, limited. Sales only occur for limited periods of time at specific seasonal periods during the year (e.g., a winter sale). Similarly, being *on red alert* contrasts with the normal state of affairs in which a lesser security status holds. Further, the states in question can be construed as volitional, in the sense that to be *on duty/sale/red* alert requires a volitional agent who decides that a particular state will hold and takes the requisite steps in order to bring such a state of affairs about.

In contrast, the semantic arguments selected for by *in* relate to states which do not necessarily hold for a limited period of time, and do not obviously contrast with a 'normal' state of affairs. Moreover, while states encoded by *on* are in some sense volitional, states associated with *in* are, in some sense, non-volitional. That is, we do not usually actively choose to be *in love*, *shock* or *a critical condition*, nor can we, by a conscious act of will, normally bring such states about. That is, these states are those we are affected, constrained and influenced by, rather than those which are actively (in the sense of consciously) chosen.

More 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 generalisation just outlined. Let's take *in* first. Consider the following examples:

(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 relates to a 'state' of some kind, these examples in fact relate to slightly different 'states': those that have a physical cause, as in (12a) – the state of being 'in milk', which is a consequence of the physical production of milk – those that have a psychological or emotional cause, as in (12b) – the state is a consequence of a subjective state, which may (or may not) have physical, i.e., observable, manifestations – those that have a social/inter-personal cause, as in (12c) – resulting from social/interpersonal interactions which result in an externally-maintained state – and those that are a result of a habitual professional activity, as in (12d). Put another way, each of these 'states' take distinct semantic arguments, relating a particular entity to quite different sorts of states. In essence, *in* appears to select for semantic arguments that relate to a delimited set of specific types of states. These can be categorised 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

Psycho-somatic 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 let's consider *on*. The semantic arguments selected for by *on* appear to relate to adjectives or nouns of action which involve a particular state which can be construed as 'active' or 'functional'. This stands in contrast to a, perhaps, normative scenario in which the state does not hold. In other words, states described by instances of *on* are often temporally circumscribed and thus endure for a prescribed or limited period of time. In this, the states referred to are quite distinct from those that *in* serves to describe. Here, 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

In view of the above, what does this reveal with respect to the existence of conceptual metaphors? The distinct collocational patterning associated with the state meanings of English prepositions such as *in* and *on* is not predicted by positing a general STATES ARE LOCATIONS conceptual metaphor. This does not necessarily mean that there is not a STATES ARE LOCATIONS conceptual metaphor.[7] However, what it does reveal is that the kind of states that are encoded by particular forms pattern in ways which are not predicted by, and, in principle, are independent of a more abstract level of conceptual metaphor.

Empirical findings such as these, have led me, in previous work, to posit a dissociation between conceptual metaphors, and the level of cognitive representation that I refer to as that of lexical concepts (e.g., Evans 2004, 2009b, 2010a, 2010b).

[7] It is worth observing that as lexical concepts are language-specific, my claim would be 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 using *on* in (17) would have to be rendered in quite different ways.

While a conceptual metaphor provides a level of non-linguistic, which is to say, conceptual organisation, 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.[8] Lexical concepts are conventionally paired with forms, and amongst other things, specify the range of semantic arguments that a lexical form can be paired with. For instance, in earlier work (Evans 2010a) I have argued that while *in* has the following distinct lexical concepts conventionally paired with it: [PHYSIOLOGICAL STATE], [PSYCHO-SOMATIC STATE], [SOCIO-INTERPERSONAL STATE] and [PROFESSIONAL STATE], which correspond to the examples in (13), (14), (15), (16) above, the preposition *on* has the [ACTIVE STATE] lexical concept paired with it.

The terms [ACTIVE STATE] versus [PHYSIOLOGICAL STATE], [PSYCHO-SOMATIC STATE], [SOCIO-INTERPERSONAL STATE] and [PROFESSIONAL STATE] reflect a distinction in the types of states that are conventionally associated with each preposition. In sum, the way in which English language users appear to differentially deploy *in* and *on* suggests that, in addition to a putative STATES ARE LOCATION conceptual metaphor, there are 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 and 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 on, lexical concepts, driven by usage. I consider, first of all, the type of grammatical change known as grammaticalisation. I then briefly examine semantic change leading to the rise of polysemy.

Grammaticalisation is the phenomenon whereby a linguistic expression undergoes form-function reanalysis, such that a lexical item undergoes a shift from the open-class system to the closed-class system (e.g., Bybee et al., 1994; Heine et al., 19991; Heine & Kuteva 2007). It also applies to linguistic units that have already undergone grammaticalisation, resulting in more grammaticalised units. In order to be able to demonstrate that grammaticalisation 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, as motivated by one (or more) of the space-to-time conceptual metaphors that have been posited in the literature (e.g., Lakoff and Johnson 1999; Moore 2006).

However, as conceptual metaphors involve two domains, a source and a target, then a CMT account of grammaticalisation predicts that form-function reanalysis holds at the level of domains. We would expect, if conceptual metaphors directly motivate language change, to see grammaticalised linguistic units that exhibit either a meaning relating to a concrete domain, or a meaning that corresponds to the more

---

[8] A lexical concept (a central concept in LCCM Theory, Evans 2009b) is a cognitive representation which forms part of the linguistic rather than conceptual system. That is, while a lexical concept is a concept *qua* unit of knowledge, it is relatively impoverished, and does not of itself facilitate rehearsals of non-linguistic information such as perceptual knowledge (i.e., simulations). That is, to claim that a lexical concept does not inhere in the conceptual system does not entail that it is not a mental representation (see Evans 2009b for full details).

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. That being so, 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 grammaticalisation of the (*be*) *going to* construction. This construction, at one point in the history of the language only related to the ALLATIVE (i.e., motion). The conceptual metaphor extension account holds that the concrete ALLATIVE meaning has evolved a more abstract and hence more grammaticalised 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 also exhibits senses that are intermediate between those exhibited in (18). To illustrate, consider the following:

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

While the example of *be going to* in (18a) has an ALLATIVE meaning and *be going to* in (18b) reflects a purely FUTURE meaning, the example, in (19a) corresponds to an INTENTION meaning. It is also possible to view this sense as having a 'relic' of the spatial (ALLATIVE) meaning, as the speaker must actually move to an appropriate location in order to facilitate the act of eating. This contrasts with (19b) which encodes INTENTION and PREDICTION, but no spatial (ALLATIVE) sense is apparent. Examples like (19a) and (10b) are potentially problematic for a conceptual metaphor account because they illustrate that grammaticalisation involves a continuum of meanings rather than a clear-cut semantic shift from one domain (SPACE) to another (TIME).

If grammaticalisation is not directly motivated by conceptual metaphors, what then gives rise to the semantic shifts apparent? An increasing number of scholars propose that language use provides the motivating context for language change (e.g., Evans and Enfield 2000; Traugott and Dasher 2004). The nuances in meaning apparent in examples such as (19) are better accounted for by assuming that contextualised inferences (what Traugott and Dasher refer to as *invited inferences*), that emerge 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 reanalysis: a form comes to be associated with a new meaning. Through recurrence of such invited inference in similar bridging contexts, the situated inference becomes reanalysed, and through a process of decontextualisation, 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 let's turn to 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 classic work on the preposition *over*, Lakoff (1987) reserved a central role for conceptual metaphor in the rise of polysemy.

However, more recently, Tyler and Evans (2001, 2003) have argued that the semantic networks associated with word forms, *over* being a paradigm example, are better accounted for in terms of sense-extension motivated by a usage-based explanation, described above, giving rise to new lexical concepts. That is, semantic change, and the emergence of polysemy is a consequence of changes in the linguistic system, rather than being directly motivated by the top-down explanation provided by CMT: the view that conceptual metaphors direct semantic change.

By way of illustration, consider the following examples which are representative of what Tyler and I described as an [ABOVE] lexical concept and a [COVERING] lexical concept respectively:

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

In the first example in (20), the reading that arises involves a spatio-geometric configuration such that the lamp is higher than and located in a region that at least partially overlaps with the vertical axis of the sofa. In contrast, in the example in (20b) no such spatio-geometric relationship holds. In fact, at least from our earth bound perspective, the clouds are in fact lower than the sun. The reading conventionally associated with (20b) concerns a covering relationship: the sun is covered and hence occluded from view, by the clouds. In other words, the reading arising, the interpretation relating to 'above' versus 'covering; appears to be, at least in part, a function of the word *over*, which in these examples appears to have two distinct meaning units conventionally associated with it.

In terms of a diachronic relationship, the [ABOVE] lexical concept precedes the [COVERING] lexical concept. Moreover, 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 and Evans 2003). Given that semantic change is a motivated process, it stands to reason that the covering lexical concept emerged from the [ABOVE] lexical concept—or a lexical concept that itself derived from, ultimately, the [ABOVE] lexical concept.

In our work, Tyler and I argued that the most plausible motivation for the emergence of the [COVERING] lexical concept derived from usage contexts in which an [ABOVE] meaning implied a covering interpretation. That is, we proposed that semantic change resulting in the emergence of polysemy involves a bridging context. To illustrate, consider the following example:

(21) The tablecloth is over the table

This sentence describes a spatial scene involving one entity, the entity which is located 'above', that is larger than the landmark entity, the entity below. A consequence of the larger tablecloth being located higher than the table is that the tablecloth thereby covers and so occludes the table from view. In other words, covering is a situated inference: it emerges in this particular context, a function of the spatio-geometric relation holding between the table and the tablecloth. Tyler and I argued that it is contexts such as these, and the use of *over* in such contexts, that leads to this situated implicature becoming detached from the context of use, and reanalysed as a lexical concept in its own right. This process of detachment and reanalysis, following pioneering work on semantic change by Elizabeth Closs-Traugott (e.g., Traugott 1989), we referred to as *pragmatic strengthening*. In essence,

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 metaphors.

## 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, I have argued that conceptual metaphors themselves cannot account for more than a subset of the figurative language that arises in ordinary language use.

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

Nevertheless, it is starting to become clear what the desiderata are for a generalised theory of conceptual integration. Firstly, we require an account of the respective roles of linguistic and non-linguistic knowledge in meaning construction, including discourse metaphors and lexical concepts—which lie at the linguistic end of the knowledge continuum—as well as conceptual metaphors and other conceptual knowledge representations—that reside in the conceptual system. We also require a means of modelling the compositional and inferential processes that apply, thereby facilitating integration.

In recent work I have begun to develop an account of linguistically-mediated meaning construction: LCCM Theory—the Theory of Lexical Concepts and Cognitive Models (Evans 2006, 2009b, 2010b). This perspective is continuous with the agenda associated with CBT developed by Fauconnier and Turner (2002). In particular, one of the aims of LCCM Theory is to provide a detailed account of the principles that guide composition—one of the fundamental aspects of conceptual integration. It attempts to provide a principled means of accounting for the integration of linguistic content (semantic structure) and conceptual content (conceptual structure), one of the key issues involved in meaning construction. In this section I briefly introduce the LCCM approach to figurative language, before discussing how this perspective allows us to model the way in which 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*

The Theory of Lexical Concepts and Cognitive Models, or LCCM Theory for short (see Evans 2006, 2007, 2009a, 2009b, 2010a, 2010b) provides a theoretical account of lexical representation and semantic composition in language understanding. It models the nature of the symbolic units in language—and in particular semantic structure—the nature of conceptual representations, and the compositional mechanisms that give rise to the interaction between the 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 which are central to the model developed: the lexical concept and cognitive model.

The overarching assumption of the theory is that the linguistic system emerged, in evolutionary terms, much later than the earlier conceptual system. The utility of a linguistic system, on this account, is that it provides an executive control mechanism facilitating the deployment of conceptual representations in service of linguistically-mediated meaning construction. Hence, 'semantic' representations in the two systems are of a qualitatively distinct kind. 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)—which encodes a bundle of various types of highly schematic *linguistic content* (see Evans 2006, 2009a, 2009b).

While lexical concepts encode highly schematic linguistic content, a subset—those associated with open-class forms—are connected, and hence facilitate access, to the conceptual system. Lexical concepts of this type are termed *open-class lexical concepts*.[9] Such lexical concepts are typically associated with multiple *association areas* in the conceptual system, collectively referred to as its *access site*.

While the linguistic system evolved in order 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 some similarities with that of other species (Hurford 2007). In contrast to the linguistic system, the conceptual system evolved to facilitate functions such as perception, categorisation, 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, and derives from the full range of experience types processed by the brain including sensory-motor experience, proprioception and subjective experience including affect.

The conceptual content encoded as cognitive models can become re-activated during a process referred to a *simulation*. Simulation is a general purpose computation performed by the cognitive system in order to implement the range of activities that subserve a fully functional conceptual system. Such activities include conceptualisation, inferencing, choice, categorisation and the formation of ad hoc categories.[10]

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

An important construct in LCCM Theory, and one that is essential to providing an account of figurative language understanding, as we shall see below, is that of the *cognitive model profile*. As an open-class lexical concept facilitates access to numerous association areas within the conceptual system, it facilitates access to

---

[9] See Evans (2009b) for the rationale for this position.

[10] 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.

numerous cognitive models. Moreover, the cognitive models to which a lexical concept facilitates access are themselves connected to other cognitive models. The range of cognitive models to which a given lexical concept facilitates direct access, and the range of additional cognitive models to which it therefore facilitates indirect access is termed its *cognitive model profile*.

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

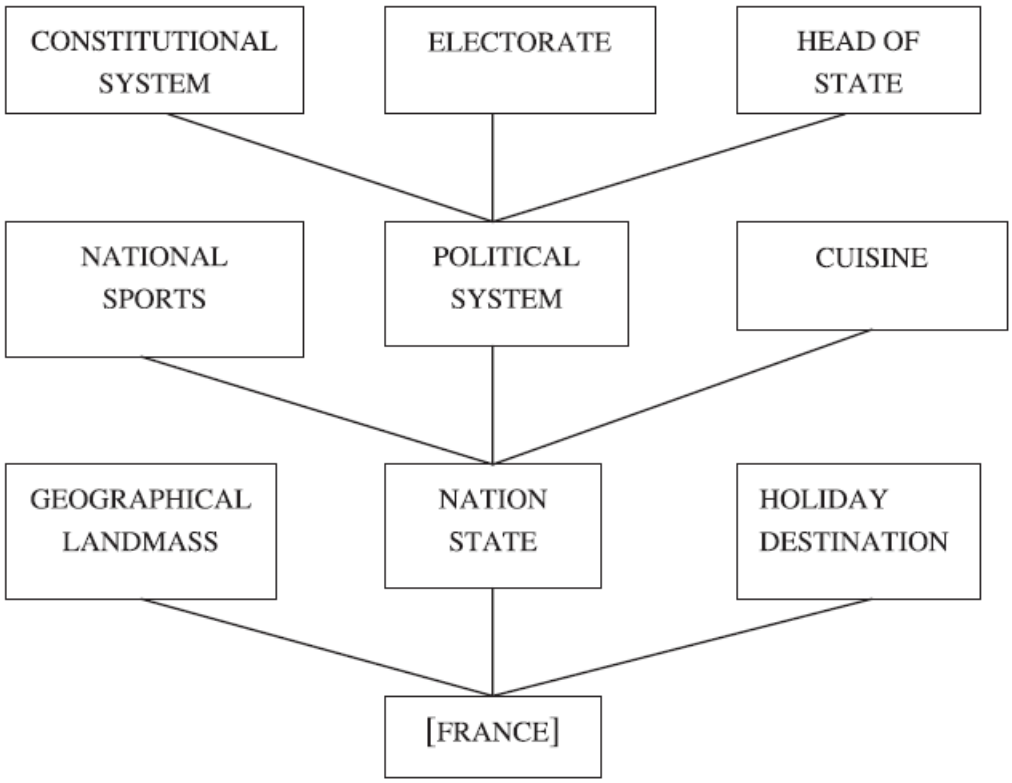


Figure 1. *Partial cognitive model profile for* [FRANCE]

Figure 1 represents an attempt to capture the sort of knowledge that language users must have access to when speaking and thinking about France. As illustrated by Figure 1, the lexical concept [FRANCE] provides access to a potentially large number of cognitive models. As each cognitive model consists of a complex and structured body of knowledge which provides access to other sorts of knowledge, LCCM Theory distinguishes between cognitive models which are directly accessed via the lexical concept—*primary cognitive models*—and those cognitive models which form sub-structures of those which are directly accessed—*secondary cognitive models*. These secondary cognitive models are indirectly accessed via the lexical concept.

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 hypothesised to include: GEOGRAPHICAL LANDMASS, NATION STATE and HOLIDAY DESTINATION. Each of these cognitive models provides access to further cognitive models. In Figure 1 a flavour of this is given by virtue of the various secondary

cognitive models which are accessed via the NATION STATE cognitive model: the *secondary cognitive model profile*. These include NATIONAL SPORTS, POLITICAL SYSTEM and CUISINE, which are hypothesised to be conceptually more removed from the lexical concept [FRANCE]. For instance, we may know that in France, the French engage in national sports of particular types, for instance, football, rugby, athletics, and so on, rather than others: the French don't typically engage in American football, ice hockey, cricket, and so on. We may also know that as a sporting nation they take part in international sports competitions of various kinds, including the FIFA football world cup, the Six Nations rugby competition, the rugby world cup, the Olympics, and so on.

That is, we may have access to a large body of knowledge concerning the sorts of sports French people engage in. We may also have some knowledge of the funding structures and social and economic conditions and constraints that apply to these sports in France, France's international standing with respect to these particular sports, and further knowledge about the sports themselves including the rules that govern their practice, and so on. This knowledge is derived from a large number of sources including direct experience, and via cultural transmission (including language).

With respect to the secondary cognitive model of political system, Figure 1 illustrates a sample of further secondary cognitive models which are accessed via this cognitive model. In other words, each secondary cognitive model has further (secondary) cognitive models to which it provides access. For instance, (FRENCH) ELECTORATE is a cognitive model accessed via the cognitive model (FRENCH) POLITICAL SYSTEM. In turn the cognitive model (FRENCH) POLITICAL SYSTEM is accessed via the cognitive model NATION STATE. Accordingly, NATION STATE is a primary cognitive model while ELECTORATE and POLITICAL SYSTEM are secondary cognitive models. [11]

LCCM Theory is motivated, in large part, by the observation that word meanings vary across contexts of use in terms of the conceptualisation(s) that they, in part, give rise to. To illustrate, consider the following examples which relate 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 the example in (22a), *France* relates to a specific geographical landmass coincident with the borders of mainland France. In (22b), *France* relates to the political nation state, encompassing its political infrastructure. The essential insight of LCCM Theory is that the linguistic (and indeed extralinguistic) context guides the way in which 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 the example in (22a) the linguistic context conspires to activate the LANDMASS cognitive model accessed by [FRANCE]. In contrast, in the example in (22b), the linguistic context serves to activate the NATION STATE cognitive model to which the lexical concept [FRANCE] facilitates access. In other words,

[11] The hierarchical organisation of a cognitive module results from the empirical finding that knowledge appears to be organised, and that certain knowledge types appear to exhibit typicality effects: some types of knowledge appear to be more central and others more peripheral for particular lexical concepts. See Evans (2009b) for discussion.

context serves to constrain which part of the cognitive model profile that a given lexical concept facilitates access to. And this allows us to model the protean nature of word meaning.

. *Literal versus figurative conceptions*[12]

As we have just seen, the way in which 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 referred to, in LCCM Theory, as *matching*. As we shall see, a failure to match across two or more primary cognitive model profiles is one of the hallmarks of figurative language in LCCM Theory.

More specifically, the distinction between what I refer to as a *literal conception*—the meaning associated with a literal utterance—on the one hand, and a *figurative conception*—the meaning associated with a figurative utterance—on the other, relates to that part of a word's *semantic potential*—which in the context of LCCM Theory relates to its cognitive model profile (although see Allwood 2003)—which is activated during the process of constructing a conception. While a literal conception canonically results in an interpretation which activates a cognitive model, or cognitive models, within the primary, which is to say default, cognitive model profile, a figurative conception arises when a *clash* arises in the primary cognitive model profiles subject to matching. This is resolved by one of the cognitive model profiles achieving a match in its secondary cognitive model profile.

To illustrate, 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

A literal conception arises for the first example, in (23), by virtue of a match occurring between the interpretation that arises from 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. This occurs as follows. The resulting interpretation for [BEAUTIFUL] and [LANDSCAPE] undergoes matching with the cognitive model profile to which the lexical concept [FRANCE] facilitates access. Hence, a search takes place in the primary cognitive model profile associated with [FRANCE]. Constrained by principles that ensure conceptual and schematic coherence (see Evans 2009b), a match is achieved in the primary cognitive model profile of [FRANCE].

In particular, in the example in (23), the GEOGRAPHICAL LANDMASS cognitive model for [FRANCE] is activated (recall the cognitive model profile for [FRANCE] presented in Figure 1). That is, it is this cognitive model which achieves a match with the interpretation associated with the expression *beautiful landscape*. Hence, the

[12] I make no distinction here between specific types of figurative conception, for instance metaphor versus metonymy, which lies beyond the scope of the present paper. For such a distinction, see Evans (2010b).

conception which arises for (23) is literal, as activation occurs solely in the primary cognitive model profile (of [FRANCE]).

In contrast to (23), the example in (24) would usually be judged to be figurative in nature. While *France* in (23) refers to a specific geographical region—that identified by the term *France*—in the example in (24) *France* refers to the electorate majority who voted against implementing an EU constitution in a 2005 referendum.

This figurative conception arises due to a clash arising between the primary cognitive model profile of [FRANCE], and the interpretation associated with the expression *rejected the EU constitution*. That is, none of the primary cognitive models to which [FRANCE] facilitates access can be matched with the interpretation for *rejected the EU constitution*.

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

With respect to the example in (24), a secondary cognitive model is identified which achieves conceptual coherence thereby avoiding a clash, and thus achieving a match. The cognitive model which achieves activation is the ELECTORATE cognitive model (see Figure 1). Hence, in (2), the process of matching results in a figurative interpretation for [FRANCE] which is that of 'electoral majority'. As the ELECTORATE cognitive model is a secondary cognitive model, this means that the conception is figurative in nature.

In sum, 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 the primary cognitive model profiles of the relevant lexical concepts necessitating clash 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*

The LCCM Theory perspective assumes that figurative meaning construction involves a number of different knowledge types. One type of knowledge involves primary conceptual metaphors (Grady 1997b; Lakoff and Johnson 1999). Recall that these are hypothesised to be cross-domain conceptual primitives that arise automatically on the basis of pre-conceptual and universally-shared experience types. A second knowledge type involves compound metaphors (Grady 1997b, 2005; see also Lakoff and Johnson 1999, who prefer the term *complex metaphor*). These are, in effect, complex bodies of knowledge arising through processes of conceptual integration (in the sense of Fauconnier and Turner). Hence, they are a type of (often very complex) blend. Specific proposals as to how these arise have been made by Grady (1997b, 2005; and indeed Fauconnier and Turner, e.g., 2008).

The common denominator in primary and compound metaphors is that they involve knowledge that is recruited from other regions of conceptual space, which is to say, from other domains of experience. In LCCM Theory I assume that primary and compound metaphors structure the cognitive models that make up a lexical concept's cognitive model profile, as we shall see below. Hence, on the present account, conceptual metaphors (whether primary or compound), form part of the

knowledge to which an open-class lexical concept potentially facilitates access. Hence, they form part of the conventional body of knowledge that is 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*. Semantic affordances (elaborated on in more detail below) are the 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 access (primary cognitive models), and indirect access (secondary cognitive models). These inferences constitute semantic affordances. Moreover, semantic affordances are activated during the process of (figurative) language understanding, as mediated by context, as described above. For instance, semantic affordances potentially activated by the selection of the lexical concept [WHIZZ] might 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, are both 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 respective roles of conceptual metaphors and semantic affordances in figurative meaning construction:

*Claim 1:* As argued in section 3.1. earlier, there are compelling reasons for thinking that conceptual metaphors, while part of the story, actually underdetermine the 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 that is specific to a given lexical concept. It arises during figurative (and indeed non-figurative) language understanding. It is 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 (and non-linguistic) context. A lexical concept can, in principle, facilitate activation of a vast number of semantic affordances, only constrained by the cognitive model profile to which it facilitates access. Moreover, a lexical concept can give rise to more than one semantic affordance in any utterance, a consequence of the extra-linguistic context (venue, time, interlocutors, and so forth), the linguistic context, and the processes of meaning construction which apply.

To illustrate, consider the following utterances:

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

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

While these examples are no doubt, in part, a consequence of conceptual metaphors for time (for instance, in terms of their 'location' in time, as either being future, as with (26a) or past as with (26b), the forms *approaching* and *whizz* give rise to distinct and distinctive semantic affordances. These cannot be predicted solely on the basis of the common conceptual metaphor that is meant to license these examples (in CMT).

For instance, the semantic affordance associated with the lexical concept [APPROACHING] relates to 'relative imminence'. The occurrence of the event in question, which in (26a) concerns Christmas, is construed as imminent. In contrast, the semantic affordance associated with [WHIZZ] in (26b) has to do not with imminence, but with the perceived compressed durational elapse associated with the observer's experience of Christmas. In other words, the semantic affordance relates to the phenomenological experience that, on the occasion referred to in (26b), Christmas felt as if it lasted for a lesser period than is normally the case. While the Moving Time conceptual metaphor allows the language user to apply relational structure from our experience of objects moving in space, and so interpret Christmas metaphorically as an object, part of the interpretation that arises also involves semantic affordances that are unique to given lexical concepts for motion. In other words, as the inferences just mentioned are specific to lexical forms, it is theoretically more accurate to assume that this aspect of meaning construction involves a bottom-up process: they arise due to activation of knowledge (i.e., semantic affordances) specific to the lexical concepts in question, rather than a top-down process of overarching conceptual metaphors.

*Claim 3*: My third claim is that conceptual metaphors and semantic affordances provide two complementary types of knowledge which are essential to figurative language meaning construction. LCCM Theory assumes that language use, and specifically figurative conceptions, draw on a number of different types of knowledge. These include purely linguistic knowledge, 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 as briefly described earlier (see Evans 2009b for full details). Conceptual knowledge takes different forms and, as mentioned above, includes (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. As LCCM Theory takes a usage-based perspective, I assume that any utterance will always involve invocation of various knowledge types in producing a conception, including context of use.

*Claim 4*: Finally, I claim that conceptual metaphors (in LCCM Theory) 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. This lexical concept, for instance, potentially facilitates access to relational knowledge concerning the motion of objects through space. This allows language users to invoke inferences associated with objects in motion in order to understand

temporal relations involving the relative 'location' in time of the temporal event Christmas. I illustrate, in the next section, as to 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 the interaction between conceptual metaphors and semantic affordances.

To illustrate this interaction, I make use of 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, presumably, is part of the story, allowing us to conceptualise a temporal event, Christmas, in terms of inferential structure associated with objects, and the relative locations on a path in terms of temporal notions of past, present and future, it is not the whole story.

It cannot be the whole story for the following reason: while the first sentence provides an inference relating to relative imminence of the temporal event, no such inference is provided by the second sentence (27b). In fact, the second sentence provides an inference that the temporal event, Christmas, was perceived as having a relatively shorter temporal elapse than usual: the phenomenon of temporal compression (see Evans 2004, 2009b: chapter 15). Moreover, these inferences are independent of the Moving Time conceptual metaphor. They must be as 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

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

The lexical concept [CHRISTMAS] facilitates access to a number of primary cognitive models, as illustrated in Figure 2. These include knowledge relating to Christmas as a CULTURAL FESTIVAL, including the exchange of gifts and other cultural practices. The second type of knowledge relates to Christmas as a TEMPORAL EVENT. This includes a whole host of temporal knowledge associated with the TEMPORAL EVENT cognitive model— (see Evans 2009b for detailed discussion). For instance, part of our knowledge relating to a temporal event is that it can be situated in the PAST, PRESENT, and FUTURE. A further attribute relates to the nature of the durational elapse associated with the event, which is to say its DURATION. This attribute has a number of values associated with it. Moving from right to left, the first is TEMPORAL

COMPRESSION—the underestimation 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 final value is PROTRACTED DURATION. This relates to an overestimation of duration, which is to say the felt experience that time is proceeding more 'slowly' than usual. The final primary cognitive model diagrammed in Figure 2 is that of Christmas as a RELIGIOUS FESTIVAL. This relates to knowledge concerning the nature and status of Christmas as a Christian event, and the way in which this festival is enacted and celebrated.

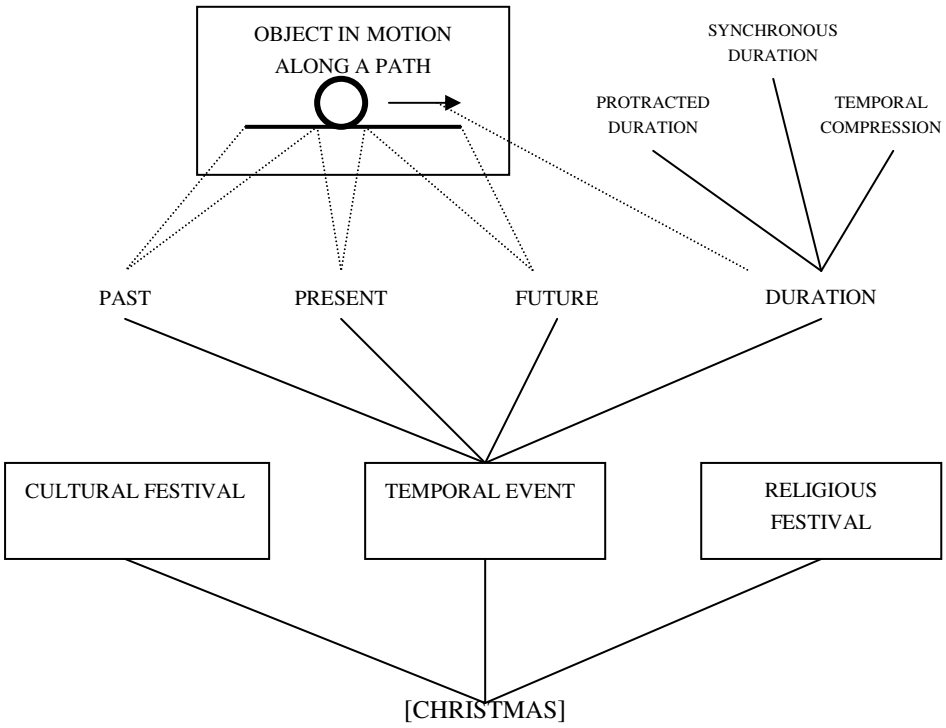


Figure 2. Partial primary cognitive model profile for [CHRISTMAS]

In addition, the primary cognitive models for [CHRISTMAS] recruit structure from other cognitive models via conceptual metaphor. That is, as operationalised in LCCM Theory, a conceptual metaphor provides a stable link that allows aspects of conceptual content encoded by one cognitive model to be imported so as to form part of the permanent knowledge representation encoded by another.

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

Specifically, 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 to structure, in part, our experience of pastness, conceptual content relating to the object's present location serves to structure, in part, our experience of the present, and content relating to that portion of the path in front of the object serves to structure our experience of futurity. 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 relevant attributes: FUTURE, PRESENT, PAST. In addition, content relating to the nature of motion is inherited by the DURATION attribute. Again this is captured by the dashed arrow, which links the arrow—signifying motion—with the duration attribute.

We are now in a position to see how a sentence such as (27a) is understood as relating to a temporal event which is 'located' in the future.

In terms of the inference arising from (27a), that the event of Christmas is situated in the future, this is 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. That is, the conceptual metaphor structures the primary cognitive model TEMPORAL EVENT, providing it with relational structure recruited from a cognitive relating to motion through space.

Hence, in terms of the utterance in (27a), matching is achieved in the primary cognitive model profiles of both [CHRISTMAS] and [APPROACHING]. After all, due to the conceptual metaphor, [CHRISTMAS] facilitates access to relational structure derived from the motion scenario involving an object in motion. This knowledge 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, and hence, the object in motion is in front of the entity with respect to which it is ''approaching''. As 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. And the resulting match involves an interpretation in which the temporal event of Christmas is 'located' in the future. In other words, this particular interpretation is a consequence of a special type of matching I refer to as *conceptual metaphor matching*.

Importantly, 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 on the basis of activation in the secondary cognitive profile of one of the lexical concepts undergoing matching (and clash resolution).

The second issue to account for with respect to (27a) concerns the inference that the temporal event of Christmas in (27a) is relatively imminent. This interpretation arises, I argue, due to additional matching in the secondary cognitive model profile of [APPROACHING]. The fact that conceptual metaphor matching has occurred does not preclude further matching. This process attempts to construct an interpretation for [CHRISTMAS] and [APPROACHING] by first searching the primary cognitive models of both these open-class lexical concepts. As 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. This necessitates clash resolution.[13] The consequence is that a search is established in the secondary cognitive model profile of [APPROACHING].

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

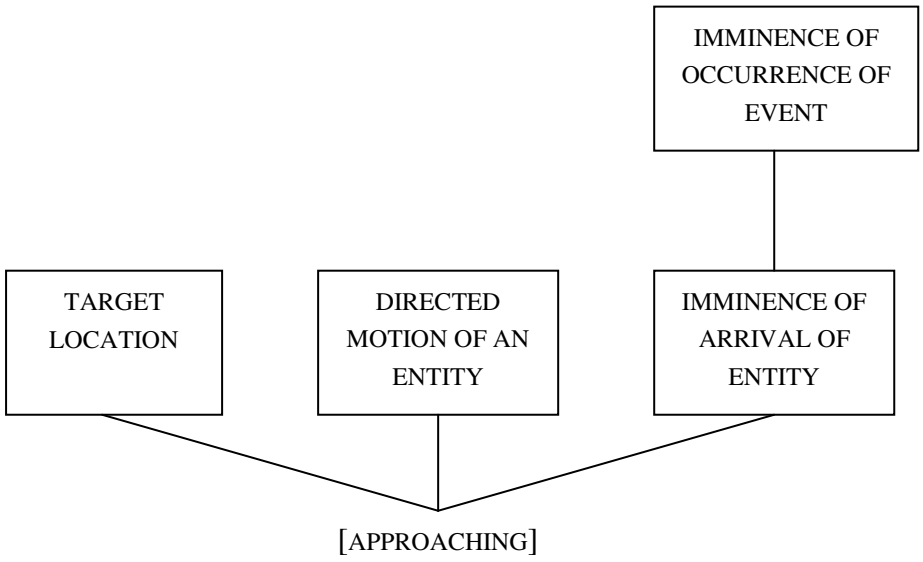


Figure 3. Partial cognitive model profile for [APPROACHING]

This analysis reveals that the interpretation of (27a) involves more than simply a conceptual metaphor. A number of different knowledge types are involved, and 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 its 'location' in the future. And, it requires understanding, through clash resolution, that the type of motion involved implicates relative imminence of occurrence, achieved without recourse to conceptual metaphor—a semantic affordance.

## 5. Conclusion

In this paper I have argued that while an important theoretical construct, conceptual metaphor is but one type of knowledge unit that plays a role in figurative meaning construction. In particular, I have argued that while conceptual metaphors inhere in

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

the conceptual system, there is a class of metaphors—discourse metaphors—which emerge and evolve in and through language use, and inhere in the linguistic system. Indeed, I refer to the semantic units associated with words, and other linguistic expressions as lexical concepts. I also introduced LCCM Theory, and suggested that lexical concepts provide access to non-linguistic knowledge representations, cognitive models, which can be structured in terms of conceptual metaphors. The integration of lexical concepts, in figurative meaning construction, gives rise to integration of conceptual metaphors with other types of conceptual knowledge, most notably, semantic affordances. It is the combination of these two types of knowledge representation that facilitate figurative meaning construction in 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.

*References*

Allwood, J. (2003). Meaning potential and context. In H. Cuyckens, R. Dirven & J. Taylor (eds). *Cognitive Approaches to Lexical Semantics*. Mouton de Gruyter, pp. 29-65.

Barsalou, L. (1999). Perceptual symbol systems. *Behavioral and Brain Sciences*, 22, 577–660

Barsalou, L. (2005). Continuity of the conceptual system across species. *Trends in Cognitive Sciences*, 9: 309-311.

Barsalou, L. (2008). Grounded cognition. *Annual Review of Psychology*, 59, 617-645.

Black, M. (1979). More about metaphor. In A. Ortony (ed.). *Metaphor and thought*, pp. 19-42. Cambridge: Cambridge University Press.

Blank, G. D. (1988). Metaphors in the lexicon. *Metaphor and Symbolic Activity, 3,* 21-36.

Bowdle, B. and D. Gentner. (2005). The career of metaphor. *Psychological Review*, 112: 193-216.

Boroditsky, L. (2000). Metaphoric structuring: Understanding time through spatial metaphors. *Cognition*, 75, 1, 1-28.

Bybee, J., R. Perkins & W. Pagluica. (1994). *The evolution of grammar: Tense, aspect and modality in the languages of the world*. Chicago: University of Chicago Press.

Casasanto, D. & L. Boroditsky. (2008). Time in the mind: Using space to think about time. *Cognition,* 106, 579-593.

Chatterjee, A. (2010). Disembodying cognition. *Language and Cognition*, 2-1: 79-116.

Coulson, S. (2000). *Semantic Leaps*. Cambridge: Cambridge University Press.

Coulson, S. (2008). Metaphor comprehension and the brain. In R. Gibbs (ed.), *The Cambridge handbook of metaphor and thought*, pp. 177-196. Cambridge: Cambridge University Press.

Evans, N. & D. Wilkins. (2000). In the mind's ear: The semantic extensions of perception verbs in Australian languages. *Language,* 76-3: 546-592.

Evans, V. (2004). *The structure of time: Language, meaning and temporal cognition*. Amsterdam: John Benjamins.

Evans, V. (2006). Lexical concepts, cognitive models and meaning-construction. *Cognitive Linguistics* 17-4, 491-534.

Evans, V. (2007). Towards a Cognitive Compositional Semantics. In U. Magnusson, H. Kardela and A. Glaz (eds.), *Further Insights in Semantics and Lexicography*, pp. 11-42. Poland: University Marie Curie University Press.

Evans, V. (2009a). Semantic representation in LCCM Theory. In V. Evans and S. Pourcel (eds.). *New Directions in Cognitive Linguistics*, pp. 27-55. Amsterdam: John Benjamins.

Evans, V. (2009b). *How words mean: Lexical concepts, cognitive models and meaning construction*. Oxford: Oxford University Press.

Evans, V. (2010a). From the spatial to the non-spatial: The 'state' lexical concepts of *in*, *on* and *at*. In V. Evans & P. Chilton (eds.), *Language, cognition and space: The state of the art and new directions,* pp. 215-248. London: Equinox Publishing.

Evans, V. (2010b). Figurative language understanding in LCCM Theory. *Cognitive Linguistics*, 21(4): 601–662.

Fauconnier, G. & M. Turner. (2002). *The way we think: Conceptual blending and the mind's hidden complexities*. New York: Basic Books.

Fauconnier, G. and M. Turner. (2008). Rethinking metaphor. In R. Gibbs (ed.), *The Cambridge handbook of metaphor and thought*, pp. 53-66. Cambridge: Cambridge University Press.

Gallese, V. & G. Lakoff. (2005). The brain's concepts: The role of the sensory-motor system in reason and language. *Cognitive Neuropsychology*, 22, 455-479.

Gentner, D. (1983). Structure-mapping: A theoretical framework for analogy. *Cognitive Science, 7,* 155-170.

Gentner, D., B. Bowdle, P. Wolff, P. & C. Boronat. (2001). Metaphor is like analogy. In D. Gentner, K. J. Holyoak, & B. Kokinov (eds.), *The analogical mind: Perspectives from cognitive science,* pp. 199-253. Cambridge, MA: MIT Press.

Gentner, D., M. Imai & L. Boroditsky. (2002). As time goes by: Evidence for two systems in processing space time metaphors. *Language and Cognitive Processes*, 17-5: 537-565.

Gentner, D., & P. Wolff. (1997). Alignment in the processing of metaphor. *Journal of Memory and Language, 37,* 331-355.

Giora, R. (2008). Is metaphor unique? In R. Gibbs (ed.), *The Cambridge handbook of metaphor and thought*, pp. 143-160. Cambridge: Cambridge University Press.

Glenberg, A. (1997). What memory is for. *Behavioral and Brain Sciences*, 20, 1-55.

Glenberg, A. & M. Kaschak. (2002). Grounding language in action. *Psychonomic Bulletin and Review*, 9, 558-565.

Glucksberg, S. (2001). *Understanding figurative language: From metaphors to idioms.* Oxford: Oxford University Press.

Glucksberg S. & B. Keysar. (1990). Understanding metaphorical comparisons: Beyond similarity, *Psychological Review*, 97, 3-18.

Grady, J. (1997a). THEORIES ARE BUILDINGS revisited. *Cognitive Linguistics*, 8(4), 267-290.

Grady, J. (1997b). *Foundations of meaning: Primary metaphors and primary scenes*. Unpublished doctoral thesis, Linguistics dept. UC Berkeley.

Grady, J. (1999). A typology of motivation for conceptual metaphor: Correlation vs. resemblance. In R. Gibbs Jr. and G. Steen (eds.), *Metaphor in cognitive*

*linguistics*, pp. 79-100.
Grady, J. (2005). Primary metaphors as inputs to conceptual integration. *Journal of Pragmatics*, 37, 1595-1614.
Heine, B., U. Claudi & F. Hünnemeyer. (1991). *Grammaticalization: A conceptual framework*. Chicago: University of Chicago Press.
Heine, B. & T. Kuteva. (2007). *The genesis of grammar*. Oxford: Oxford University Press.
Hurford, J. (2007). *Origins of meaning*. Oxford: Oxford University Press.
Johnson, M., & R. Malgady. (1979). Some cognitive aspects of figurative language: Association and metaphor. *Journal of Psycholinguistic Research, 8,* 249-265.
Kaschak, M. and A. Glenberg. (2000). Constructing meaning: The role of affordances and grammatical constructions in sentence comprehension. *Journal of Memory and Language*, 43, 508-529.
Lakoff, G. (1987). *Women, fire and dangerous things: What categories reveal about the mind*. Chicago: Chicago University Press.
Lakoff, G. (1993). The contemporary theory of metaphor. In A. Ortony (ed.), *Metaphor and thought (second edition)*, pp. 202-251. Cambridge: Cambridge University Press.
Lakoff, G. (2008). The neural theory of metaphor. In R. Gibbs (ed.), *The Cambridge handbook of metaphor and thought*, pp. 17-38. Cambridge: Cambridge University Press.
Lakoff, G. & M. Johnson. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
Lakoff, G. & M. Johnson. (1999). *Philosophy in the flesh*. New York: Basic Books.
Lakoff, G. & M. Turner. (1989). *More than cool reason*. Chicago: University of Chicago Press.
Langacker, R.W. (1987). *Foundations of Cognitive Grammar: Volume I.* Stanford: Stanford University Press.
Malgady, R., & M. Johnson. (1976). Modifiers in metaphors: Effects of constituent phrase similarity on the interpretation of figurative sentences. *Journal of Psycholinguistic Research, 5,* 43-52.
Mandler, J. (2010). The spatial foundations of the conceptual system. *Language and Cognition*, 2-1: 21-44.
Marschark, M., A. Katz & A. Paivio. (1983). Dimensions of metaphor. *Journal of Psycholinguistic Research, 12,* 17-40.
McGlone, M & J. Harding. (1998). Back (or forward?) to the future: The role of perspective in temporal language comprehension. *Journal of Experimental Psychology: Learning, Memory, and Cognition,* 24, 1211–1223.
Miller, G. (1979). Images and models, similes and metaphors. In A. Ortony (ed.), *Metaphor and thought,* pp. 202-250. Cambridge: Cambridge University Press.
Moore, K. E. (2006). Space-to-time mappings and temporal concepts. *Cognitive Linguistics*, 17–2: 199–244.
Núñez, R., B. Motz & U. Teuscher. (2006). Time after time: The psychological reality of the Ego- and Time-Reference-Point distinction in metaphorical construals of time. *Metaphor and Symbol*, 21, 133-146.
Ortony, A. (1979). Beyond literal similarity. *Psychological Review, 86,*161-180.
Pulvermüller, F. (2003). *The neuroscience of language: On brain circuits of words and serial order*. Cambridge: Cambridge University Press.
Shapiro, L. (2010). *Embodied cognition*. London: Routledge.

Sweetser, E. (1988). Grammaticalization and Semantic Bleaching. In *Berkeley Linguistics Society Proceedings of the Fourteenth Annual Meeting*, pp. 389-405.

Sweetser, E. (1990). *From etymology to pragmatics: Metaphorical and cultural aspects of semantic structure.* Cambridge: Cambridge University Press.

Taylor, L. & R. Zwaan. (2009). Action in cognition: The case of language. *Language and Cognition*, 1(1): 45-58.

Traugott, E. C. (1989). On the rise of epistemic meanings in English: An example of subjectification in semantic change. *Language*, 58: 33-65.

Traugott, E. C. & R. Dasher. 2004. *Regularity in semantic change*. Cambridge: Cambridge University Press.

Tversky, A. (1977). *Features of similarity*. *Psychological Review, 84,* 327-352.

Tyler, A. & V. Evans (2001). Reconsidering prepositional polysemy networks: The case of *over*. *Language*, 77(4): 724-765.

Tyler, A. & V. Evans (2003). *The semantics of English prepositions: Spatial scenes, embodied meaning and cognition*. Cambridge: Cambridge University Press.

Vigliocco, G., L. Meteyard, M. Andrews & S. Kousta. (2009). Toward a theory of semantic representation. *Language and Cognition*, 1(2): 219-248.

Zinken, J. (2007). Discourse metaphors: The link between figurative language and habitual analogies. *Cognitive Linguistics,* 18(3)*,* 445-466.

Zlatev, J. (In press). From cognitive to integral linguistics and back again. *Intellectica*.

Zwaan, R. (2004). The immersed experiencer: Toward an embodied theory of language comprehension. In B.H. Ross (ed.), *The Psychology of Learning and Motivation*, pp. 35-62. New York, NY: Academic Press.