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Toward a Unified Account of Metonymy

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Abstract

From the perspective of cognitive linguistics, metonymy is a conceptual operation in which one entity maps onto the other entity within a single domain at the conceptual level. There are two related perspectives as to what motivates metonymy: metonymy as having a referential function and metonymy as being motivated by conceptual contiguity. However, there are some linguistic expressions that are less readily identifiable as being motivated in one of these ways.

For example, many scholars (e.g., Gibbs 1990, Barnden 2010) argues that example (1) *The creampuff didn't even show up* has a referential function, like metonymy, but is, in fact, an instance of metaphor. Analogously, in (2) *Ann has her mother's eyes*, Warren (1999) argues the relationship between the inherited characteristic is motivated by both perceptual similarity and conceptual contiguity. What these two examples reveal is the following: First, metaphor can exhibit symptoms normally attributed to metonymy, and second, there appears not to always be a clear distinction between where metonymy ends and metaphor begins. This observation leads to a number of outstanding questions. First, is metonymy in fact a unified phenomenon? Second, if not, how are metonymies motivated? Third, how is metonymy related to other figurative phenomena, especially metaphor? I argue that metonymy, while constituting a unified phenomenon, nevertheless exhibits variation.

In point of fact, I claim that examples (1) and (2) amount to distinct types of metonymy, which lie on a continuum. To answer the second question, I examine the nature of metonymic compositionality. I do so to show how metonymic linguistic 'vehicles' interface with the (non-linguistic) conceptual level in the course of figurative language understanding. Finally, I explore the relationship between metaphor and metonymy. I argue that they are related in terms of occupying a continuum with different linguistic expressions and, on occasion, exhibiting symptoms of both.

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Chapter 1

Introduction

1.1 Motivation

This thesis focusses on an analysis of figurative language, and metonymic expressions in particular, and explores questions of metonymic motivation, construction and interaction with other figurative expressions from the perspective of cognitive linguistics. Many other important studies and investigations are presented from cross-disciplinary fields such as linguistics, psychology and philosophy. These studies address different ways of considering metonymy and other figurative expressions in the nature of language and in the mind; for example, they examine how metonymy and metaphor represent our experiences in the world and how linguistic phenomena are understood and processed as conceptual phenomena in our minds. The present study contributes to the interdisciplinary effort to answer these indispensable questions. In particular, these previous accounts of human imagination often discuss deep-level cognition, or, in other words, the conceptual mechanism that facilitates meaning construction 'behind the scenes' (e.g., Coulson 2000; Evans 2004, 2009a; Fauconnier 1997; Fauconnier & Turner 2002; Lakoff & Johnson 1999; Turner 1996). To extend the previous approaches, the present study considers deep-level cognition and surface-level cognition, which is the linguistic process of understanding semantic composition. I explore when and how people establish the conceptual relationships that underlie metonymic language and constitute a link between physical experiences and human imagination. In short, by pushing towards deeper analyses of metonymy, this thesis ultimately provides a deeper level of analysis of the relationships between surface-level and deep-level cognition.

1.2 Background

Since ancient Greece, figurative expressions have been a significant topic, as they featured in rhetoric and were discussed by Aristotle and other researchers. They considered figurative expressions to be decorated and exaggerated sentences and categorised them as a technique of effective speech, in which figurative meaning was conveyed efficiently to listeners. However, this means that figurative expressions are not an academic topic because researchers

consider figurative expressions to not have meaning themselves in a sentence. As a result, they have been ignored by many scholars for a long time. However, since Conceptual Metaphor Theory (CMT) was established in 1980 (Lakoff & Johnson 1980) and cognitive linguists developed a theory showing that figurative expressions are based on embodiment and experiences, figurative expressions have been highlighted and considered a conceptual phenomenon in our everyday lives deeply related to the knowledge repositories of our minds (e.g., Croft 1993, 2006; Kövecses & Radden 1998, 1999; Langacker 1993). There are several variations in the ways scholars characterise metonymy. Lakoff and Johnson (1980) claim that the linguistic function of metonymy is indirect reference, where one entity stands for another (e.g. the crown standing for the monarchy).

A few years later, Lakoff (1987) introduces the notion of idealised cognitive models (ICMs), which are structures that represent speakers' conceptual knowledge and their semantic knowledge. Metonymic ICMs are one type of ICMs and are the basis of prototype effects. 'Metonymy is understood as a conceptual process in which one conceptual entity, the target, is made mentally accessible by means of another conceptual entity, the vehicle, within the same ICM' (Panther & Radden 1999:1). One example of this is 'mother'. People in certain cultures, e.g. Western culture, associate the concept MOTHER with HOUSEWIFE MOTHER (who stays at home, organises the household, raises children, etc.). This is typically representative of mothers. That is, there seems to exist a metonymic model in which the superordinate (stereotype) category MOTHER evokes the subordinate category HOUSEWIFE MOTHER. In general, metonymy is basically a reversible process, but a number of cognitive principles govern the selection of a preferred vehicle (Panther & Radden 1999).

From another perspective, metonymy is often described as a referential phenomenon where the name of a referent stands for another referent (Panther & Thornburg 2003). Metonymic operation as a stand for relation that is metonymy is a sort of substitution relationship; that is, metonymies are usually represented by the schema 'X (source/vehicle) for Y (target)' in a metonymic operation. However, this view seems to be too narrow because the metonymic source (vehicle) is not simply replaced by the metonymic target.

Some researchers claim that metonymy is a contingent relationship (e.g., Lakoff 1987; Langacker 1993) and emphasise its conceptual nature. Radden and Kövecses's (1999) claim has been widely accepted as a characterisation of metonymy, which this thesis relatively adopts. They propose that 'Metonymy is a cognitive process in which one conceptual entity, the vehicle,

provides mental access to another conceptual entity, the target, which in the same cognitive model' (Radden & Kövecses 1999:21).

Another notion of metonymy is as a speech act (Gibbs 1994, 1999; Thornburg & Panther 1997; Panther & Thornburg 1998). A well-known example explains that 'I would like you to close that window' means 'close that window'. The first expression of the wish metonymically evokes the request 'close that window' with regard to the action to be carried out by the listener. In other words, Gibbs (1993) claims that metonymy is operative in discourse and leads to better understanding of indirect speech acts.

Fauconnier and Turner (2002) explore another conceptual aspect of metonymy, namely the interaction of conceptual blending and metonymy. They claim that it is possible that most metaphors involve conceptual integration, and conceptual entities may be metonymically linked in a blended space. For example, 'the grim reaper' is created by conceptually integrating the term with the input elements 'scythe', 'cowl' and 'skeleton'. Thus, the blend shortens the metonymic distance between originally non-contiguous conceptual entities.

Although there are variations in ways of characterising metonymic phenomena, this thesis supports the following metonymic principle. In general, metonymy is described as one type of figurative expression, which has two entities associated with one another, in which one entity (a vehicle) stands for the other contiguous entity (a target) in a single concept. In this respect, the source-target link survives as the message. This metonymic operation is often represented as A PART FOR THE WHOLE/A WHOLE FOR THE PART relationship. On the other hand, in metaphor two entities are related but have distinct conceptual domains, describing one thing (a source) in terms of another (a target) based on some similarity. Since mapping occurs across the two different domains, the source-target link is completely absent (e.g., Dirven, 2002; Warren, 2002; Haser, 2005). In addition to these variations in metonymy characterisation, this thesis considers an alternative definition of metonymy and the interaction between metonymy and metaphors.

1.3 Research Questions

The overarching aim of this project is to expand upon previous accounts of figurative expressions and employ an alternative perspective of semantic construction. By providing a

figurative definition that focusses on the understanding process between a word and its conceptual knowledge, this thesis explores a new way to comprehend figurative expressions. In this way, the relationship between language and conception demonstrates a certain process, and the linguistic and conceptual content can be treated together. In other words, the thesis focusses on the understanding process between a lexical concept and its conceptual knowledge in order to explore a new symptom for comprehending figurative expressions. More formally, this is based on simplified cognitive models such as the Lexical Concept and Cognitive Models (LCCM) framework. I explain the advantage of this approach in more detail in a later section. In order to achieve the research goal, I have set two specific research questions:

i) Is metonymy, in fact, a unified phenomenon? And how are metonymies motivated?
ii) How is metonymy related to other figurative expressions such as metaphor?

The first question, 'Is metonymy, in fact, a unified phenomenon? And how are metonymies motivated?', refers to the fact that it is challenging to treat metonymic expressions as one unified phenomenon that does not rely on the notion of contiguity and referentiality. Previous studies have analysed the relationship between figurative source (vehicle) and target and show the pattern of the metonymic conceptual relationship, but I would say that they only cover prototypical metonymic expressions. As a result, despite the fact that there are many kinds of patterns of metonymic expressions that cannot be identified as prototypical metonymies and closed literal or metaphorical expressions, the distinctions among those metonymic expressions have not been uncovered. In order to show an alternative approach that explains all types of metonymic expressions, this thesis involves the notion of conceptual gradation between literal and metonymic expressions and gradation within metonymic expressions. In this question I first considers the boundary between literal and metonymic expressions, which clarifies some distinct criteria for literalness and metonymicity or criteria for intermediacy between literal and metonymic expressions. As a result, detailed distinctions (although using the same approach) between literal and metonymic expressions can be found.

Moreover, I also considers conceptual gradation within metonymic expressions. Different conceptual levels are discussed, namely primary and secondary entities, and physical aspects and abstract (functional) aspects are addressed as an issue. According to the traditional

theories, literalness belongs to the primary entity, while metonymicity belong to the secondary entity. This is a type of criterion for distinguishing literalness from metonymicity; by determining which entity is accessed, the sentence can be specified as having either a literal or metonymic expression. However, the identification of primary and secondary entities is different among researchers. One researcher claims that physical aspects belong more to a primary entity because it is more concrete than an abstract entity. Therefore, if an entity accesses its physical aspects, it is literal, while if it accesses abstract aspects, it is metonymic. Another researcher insists that both such entities are literal because individuals do not use the referential operation in the understanding process. Another researcher claims that physical aspects should belong to the primary entity and abstract aspects should belong to the secondary entity, but both cases are metonymic because both include a metonymic conceptual relationship, e.g. A WHOLE FOR THE PART. As such, experts have different opinions about metonymicity regarding primary and secondary entities. Most scholars in the field agree that a physical aspect is a primary entity but have diverse viewpoints when it comes to abstract (functional) aspects. Continuing to analyse entities has not yet resolved the issue of metonymic operation in the literature, and a definition of metonymy has not yet been completely determined. This thesis takes the positon that physical and abstract aspects belong to the primary entity because both aspects are essential elements for comprising a concept based on the theory of meaning construction (see Chapters 3 and 4 for more detail). In addition, I consider the linkage between metonymic vehicle and target. By doing so, the first research question is answered by concluding that there is a conceptual gradation, or spectrum, in metonymies, which differs from the claim found in traditional accounts.

The next analysis considers research question ii), 'How is metonymy related to other figurative expressions such as metaphor?', and how metonymic expressions bridge literalness and metaphor. Based on the previous analysis, there does not always appear to be a clear distinction between where metonymy ends and metaphor begins. Several examples have been found that contain characteristics of either metaphor or metonymy or include both. Therefore, it can be said that metaphor and metonymy exhibit some interaction, but there has not been enough analysis to describe these examples in the literature. There are cases that fall in between metonymy and metaphor, such as those that have some but not all of the required features of metonymy and some but not all of the required features of metaphor or are fully both metonymic and metaphoric. Thus, some expressions cannot be straightforwardly identified as either metaphor or metonym. Moreover, the studies that examine the interaction between metaphor

and metonymy use individual cases and do not systematically account for the intermediate phenomena. In order to analyse these examples, the present study adds a cognitive model to account for these examples systematically, and, as a result, I explore the conceptual spectrum (continuum) between the two phenomena, metaphor and metonymy, which includes literalness.

This thesis also adopts the LCCM theory (Evans 2006b, 2009a, 2010) and the notion of metaphor as double metonymy (Group μ 1981) in order to investigate meaning construction more precisely. Metaphorical operations and the combination of metaphor and metonymy involve more complicated operations than metonymic operations. To investigate the linkage between source and target, I use the notion of metaphor as double metonymy (Group μ 1981), where a metonymic operation occurs in both the source and target and a metaphorical connection occurs in the two metonymies. By doing so, the linkage between source and target can be easily examined and the type of linkage established between them can be considered. As a result, this thesis provides a single unified account of figurative expressions that shows a conceptual spectrum between the two phenomena of metaphor and metonymy.

In sum, I address two specific research questions in this thesis. First, I argue that metonymy, while constituting a unified phenomenon, nevertheless exhibits variation. I claim that examples show distinct types of metonymy, which lie on a continuum. Second, I explore the relationship between metaphor and metonymy. I argue that they are related by occupying a continuum with different linguistic expressions and, on occasion, exhibit symptoms of both.

1.4 Data

Since the publication of *Metaphors We Live By* by Lakoff and Johnson in 1980, a vast number of figurative expressions have been collected and analysed in different ways. As a result, the importance of improving the comprehension of figurative expressions is crucial at this stage. The aim of this thesis is to develop an understanding of how metonymicity arises, how metonymies are structured and constrained and how they interact with other figurative expressions such as metaphors.

This thesis uses numerous linguistic examples that have already been collected and mentions many conceptual metonymies used in previous studies. Many of these metonymies include the functions of 'contiguity' and 'referentiality' in their mapping systems (i.e., WHOLE

FOR A PART or A PART FOR WHOLE relationships), and various modifications are also introduced. In other words, my work re-uses data that have been previously collected in order to find and understand deeper and more significant patterns based on the same examples. I also introduce some new examples of my own throughout the thesis. In order to enforce the accuracy of interpretability, words, phrases and sentences are discussed, analysed and considered based on whether they are novel, conventional or even wrong expressions.

This thesis is based on an analysis of linguistic metonymy and relies primarily on theories of linguistic analysis. Since the topic of figurative expressions is an interest in many fields, including philosophy, psychology, cognitive science and linguistics, it is difficult to collect all relevant studies. This thesis, however, mentions some representative studies from these areas that are relevant to my work.

1.5 Method

I approach the issues discussed above primarily from the perspective of the LCCM theory (e.g., Evans 2006b, 2009a, 2010), which provides an alternative perspective on figurative language understanding. As mentioned above, the problem with previous studies of figurative expressions is that they explore only 'deep-level cognition', which is related to our experience and embodiment, and not 'front-stage cognition', which concerns how linguistic prompts work and how they are processed in semantic composition. Another issue is whether figurative expressions depend on the notions of similarity and contiguity (or referentiality). There are some expressions that are less readily identified as having features of contiguity and referentiality, which have been ignored in the literature. Therefore, we need an alternative approach to metonymic expressions.

To address the above issues, I return to the nature of figurative expressions—a shift from central to peripheral meaning. Unlike literal expressions, figurative meanings are usually abstract. Most metaphors and metonymies have a target that is more concrete than the source or equally concrete/abstract. Thus, if it is possible to explore the extension process from a metonymic vehicle to a target in conceptual knowledge and measure that distance, this would be helpful in illustrating how metonymic expressions are understood and eventually exploring the core function of metonymy and its motivation.

In order to explore the understanding process, I focus on the meaning construction that occurs when a metonymic vehicle combines with other lexical concepts in the same sentence to develop a sentence-level meaning. To account for the role of words in meaning construction in more detail, the link between a lexical concept and (non-linguistic) conceptual knowledge must be determined; however, this remains unanswered in the literature. There are diverse opinions among scholars about the question based on the perspectives of cognitive grammar and cognitive semantics, where meaning is either context-independent or context-dependent (Croft 2001; Goldberg 1995). However, the LCCM theory can somehow be compatible with both perspectives because the utility of this model helps elucidate the relationship between figurative language expressions and encyclopaedic knowledge during the course of language understanding. That is to say, the theory reasonably complements the issue by focussing on both language and conception, and it provides a unified account including both cognitive semantics and cognitive grammar perspectives. As a result, the LCCM framework can observe the distance from vehicle to target in conceptual knowledge and provides a framework with cognitive models.

In the LCCM operation, a source (vehicle) accesses encyclopaedic (conceptual) knowledge through several operations. There are two cognitive levels of conceptual knowledge: primary and secondary cognitive models. Primary cognitive models have relatively central (literal) meanings and can be accessed directly through a lexical concept (a source [vehicle]), while secondary cognitive models have more peripheral (figurative) meanings and can be accessed indirectly through a source (vehicle). The process length from a lexical concept to the conceptual knowledge relates to the level of figurativity.

Because the LCCM theory is not primarily used for understanding figurative expressions, it does not fully explain all types of figurative expressions even though it consistently explains some metaphors and metonymies. To extend the LCCM framework, I provide further analysis of figurative linguistic examples in order to understand figurative motivation and meaning construction; as a result, I provide a figurative gradation between metonymy and metaphor in a single symptom. Finally, I show that individuals can share the same conceptual understanding process in literal and figurative expressions even though encyclopaedic knowledge is dynamic and individual. I explain the details of the framework in a later chapter.

1.6 Summary and Contribution

This thesis challenges previous studies by exploring figurative expressions from a different perspective and observing different levels of figurativity with a cognitive model. This allows me to analyse two research questions. The first is 'Is metonymy, in fact, a unified phenomenon? And how are metonymies motivated?' Based on a literature review, it is clear that previous studies of metonymy tend to treat prototypical metonymies but cannot identify 'borderline expressions', which are difficult to identify as either metaphor or metonymy. In order to complement previous studies, I use the notion of conceptual gradation, which shows the level of figurativity within the LCCM framework. This study strives to apply the LCCM framework to all types of metonymic expressions that are defined as a unified phenomenon. After focussing on figurativity, I find that all metonymic expressions can be categorised into at least three levels: i) non-figurative metonymy, ii) figurative metonymy and iii) higher figurative metonymy. Rather than relying upon the features of contiguity and referentiality, metonymic expressions can be indicated by the symptom of figurativity.

The second research question is 'How is metonymy related to other figurative expressions such as metaphor?' To extend the results found in the first research chapter, the second research chapter finds that metonymy bridges literal and metaphorical expressions. By focussing on the conceptual understanding process between a source (vehicle) and target, individuals can observe different types of expressions (literal, metonymic and metaphorical) in the same way (using a single mechanism). As a result of observing conceptual distance, different levels of figurativity arise, which are symptoms of literal, metonymic and metaphorical expressions. As mentioned previously, there are several levels of metonymic expressions and several levels of metaphorical figurativity, including i) primary level metaphor, ii) secondary level metaphor and iii) higher secondary level metaphor. This shows that metonymy and metaphor can be treated as having the same symptom of figurativity.

This thesis makes a novel contribution to the field of figurative language research in three main ways. First, by using a contemporary theory of language understanding (the LCCM theory), my research is able to make good on earlier proposals (e.g., Barnden 2010; Feyaerts 1999; Goossens 1990; Peirsman & Geeraerts 2006) that figurative language expression lies on a spectrum of figurativity. I elucidate in detail the criteria for identifying where different expressions lie on that continuum. Second, this study extends the LCCM theory to the domain of metonymy for the first time and further explores how it is both similar to and distinct from

metaphor. Finally, the thesis provides a theoretical architecture revealing the ways in which individual languages, albeit with divergent bodies of encyclopaedic knowledge, process different types of figurative language expressions. If the thesis succeeds, it contributes to the understanding of figurative language by using a different approach from traditional theories and can establish a conceptual understanding process that individuals can share across communities.

1.7 Overview of the Thesis

Following this introductory chapter, I present a literature review in Chapter 2, which shows previous studies of metonymies and metaphors. Chapter 3 introduces the LCCM theory (e.g., Evans 2006a, 2009a, 2010) as a method. Chapter 4 analyses literal and metonymic examples within the LCCM framework and shows the metonymic gradation of figurativity. In addition, this chapter considers the meaning construction of metonymic expressions, focussing on the connection between source (vehicle) and target, in order to explore what types of connections arise between source (vehicle) and target and how metonymic figurativity defines the understanding processes. Chapter 5 is devoted to a further exploration of the kinds of metaphorical expressions and their figurativity. This chapter shows that metaphor and metonymy can be on a conceptual continuum by showing the different levels of figurativity. The concluding chapter, Chapter 6, summarises the basic findings of this study and discusses how they might be further investigated by other means.

Chapter 2

Literature Review

2.1 Introduction

This chapter undertakes a literature review, which critically synthesises what is currently known about figurative expressions and metonymy in particular. A key purpose of the review is to examine what kind of research has already been done and the latest research on metonymy in the literature. The review carefully explores the following key issues: i) motivation of metonymic expressions, ii) identification problems, including methods, and iii) the connection between metaphor and metonymy. In this thesis, I highlight metonymies since the cognitive mechanisms that the thesis proposes for metonymy are used in an extended from for metaphor so that in that rather indirect sense metonymy is primary.

From the perspective of cognitive linguistics, the understanding of metonymic operation varies slightly among researchers, but there are several points they all agree on: Metonymy is a conceptual phenomenon that is experientially grounded; it possesses a certain conceptual operation in which one entity can be employed to identify another entity associated in the same conception; and the two entities are experientially and conceptually connected (e.g., Barcelona 2011; Croft 1993, 2002; Lakoff & Johnson 1980; Lakoff & Turner 1987; Langacker 1993, 1999; Radden & Kövecses 1999, 1989). However, there are some ideas on which scholars disagree. I discuss these points in the following sections.

I start by describing the received view of metonymy. I review Lakoff and Johnson's (1980) pioneering theory, Conceptual Metaphor Theory (CMT), which discusses the process of understanding figurative expressions; this process is called cross-domain mapping, which serves to structure one conceptual domain in terms of another in long-term memory. I then discuss some representative studies in cognitive linguistics, such as those by Langacker (1993), Croft (1993), Radden and Kövecses (1998, 1999) and Dirven (1993), which are still seminal insights into metonymic understanding. The authors have relatively similar ideas that a metonymic vehicle refers to or highlights a target in the same non-linguistic encyclopaedic knowledge and that the two entities closely associate with each other; however, this is by no means a completely uniform notion, since there is some disagreement among these authors. I

also examine the connection between metonymy and metaphor (e.g., Barcelona 2011; Barnden 2010; Ruiz de Mendoza 2003; Warren 1999). Finally, I discuss and summarise the findings and issues of the received view of metonymy.

2.2 Received View of Metonymy

The figurative expressions of metaphor and metonymy have a long history. Since the times of the ancient Greeks, many people have used them as a skill of rhetoric or to persuade people politically. In terms of this, figurative expressions have not been properly analysed in the academic field. However, since Lakoff and Johnson (1980) established a cognitive science approach to figurative expressions, they have been analysed not only as rhetoric but also as conceptual phenomena based on human experiences, such as embodiment and the sensory-motor mechanism. In their theory, CMT, Lakoff and Johnson explain metaphor as consisting of two entities associated with each other, in which one thing (a source) is presented in terms of another (a target). In metonymy, on the other hand, one entity (a vehicle) stands for the other (a target). Because Lakoff and Johnson focus mainly on understanding metaphors as well as on metaphor and metonymy, which share a similar operation referred to as a mapping system between the two entities, metonymy has been considered a subclass of metaphor.

Because Lakoff and Johnson (1980) established cognitive linguistics, only metaphor was highlighted by researchers for a long time. However, recently, many researchers consider conceptual metonymy to also be an independent cognitive phenomenon (e.g., Croft 1993; Langacker 1995; Radden & Kövecses 1998, 1999). These scholars claim that metaphor and metonymy are different phenomena because they are related to different principles. However, it is still an important issue that there is not always a clear distinction of where metonymy ends and metaphor begins.

Since then, some researchers have claimed that metaphor and metonymy are not simply different, independent notions, but that these expressions express some interaction (e.g., Barcelona 2003, 2010; Barnden 2010; Dirven1993; Goossens 1990; Radden 2002; Ruiz de Mendoza & Díez 2002; Warren 1999). This is because metaphor can exhibit symptoms normally attributed to metonymy; it is difficult to identify the border between the two entities (domains) in expressions, which raises ambiguity when determining whether something is

metaphor or metonymy. Therefore, merely comparing the conceptual elements within a traditional conceptual framework does not lead to a precise distinction or treatment of the two notions. In this context, this section reviews the received view of metonymy.

2.2.1 Conceptual Metaphor Theory

Conceptual Metaphor Theory, established by Lakoff and Johnson in 1980, is widely well-known to have contributed to the understanding of metaphor, and many other scholars have followed and further developed this theory. Lakoff and Johnsons' attention is paid to the understanding of metaphorical expressions, and they briefly mention metonymy in a few pages. The basic claim of CMT is that metaphor is a mundane phenomenon and is a very frequent, regular feature of language, although it is often treated specially, like an exceptional expression or an imaginative achievement. I briefly introduce CMT here.

Consider the following metaphorical examples in terms of LOVE. The italicised lexical items in each of the following are taken to be figurative.

(1) Look *how far* we've come (Lakoff & Johnson 1980)

(2) We're at a *crossroads* (Lakoff & Johnson 1980)

(3) We're just *spinning our wheels* (Lakoff & Johnson 1980)

(4) It's been a *long, bumpy road* (Lakoff & Johnson 1980)

The expressions above are generated from a conceptual metaphor, LOVE IS A JOURNEY. Lakoff and Johnson (1980) and other followers suggest that when people talk about LOVE, they use a particular type of lexis, which comes from the domain of JOURNEY. This means that the conceptual metaphor has systematic structures in the metaphorical transference of language and inferences between the two distinct domains, which means that linguistic metaphors are not isolated lexical usages that always arise in accordance with the conceptual structure that is networks of metaphorical transference. In other words, metaphorical transference is not the result of coincidence. Rather, it is likely to be evident that there is a systematic correspondence between the two distinct concepts. The two domains involve experientially and conceptually connected similar elements. However, the metaphorical correspondence between source and

target is not only a matter of pointing out similarity. Some conceptual metaphors cannot be reversed at all (e.g., we can say that LOVE IS A JOURNEY but not that a JOURNEY IS LOVE) or only with difficulty, but some are reversible. For instance, A STORM IS ANGER (e.g. the storm was *raging* for hours) can be reversed to be ANGER IS A STORM (e.g. it was a *stormy* meeting). Such a reversal, however, can provide a different meaning as a result or possibly involving different mappings (Kövecses 2002).

Metaphorical motivation is likely to be based on bodily experiences, but it is not applied to all expressions. Since certain pairings of concepts repeatedly appear in our everyday language, conceptual metaphors can be considered entities—established structures in long-term memory—that allow us to create and understand linguistic expressions or phrases related to a conceptual metaphor. Therefore, metaphor in language is a reflection of metaphor in thought. As we see, conceptual metaphor is not deviant; it is conventional, ubiquitous and the norm. Conceptual metaphors are not restricted to particular areas and not always novel or concrete concepts, and they work automatically and unconsciously in our minds. As a result, conceptual metaphor helps us think about abstract, complex phenomena in simpler, more familiar terms. This is how we deal with the real world. That is why conceptual metaphor is not only a linguistics claim, but also a philosophical and psychological claim.

The definition of metonymy in CMT is relatively based on that of metaphor. Metonymy is also a conceptual phenomenon that relates to our experiences, thoughts, attitudes and actions. It conceptually and systematically structures one entity standing for another, which focusses on a certain aspect of what is being referred to. Unlike a metaphor, a metonymic relationship between a vehicle and a target involves contiguity, since the matching occurs within a single domain. To explore this in more detail, consider the following metonymic examples:

(5) *The automobile* is clogging our highways (Lakoff & Johnson 1980)

(6) She's just a *pretty face* (Lakoff & Johnson 1980)

(7) He's got a *Picasso* in his den (Lakoff & Johnson 1980)

(8) *Wall Street* is in a panic (Lakoff & Johnson 1980)

In example (5), *the automobile* refers to 'a collection of automobiles'; more than one automobile is referred to in the context. This example uses the PART FOR THE WHOLE relationship. In example (6), the word *face* refers to a human being, since *face* represents a human being. People can receive general information about a person from his or her face, and we distinguish people from each other by recognising faces; this is the FACE FOR THE PERSON relationship. Example (7), 'He's got a *Picasso* in his den', uses the PRODUCER FOR PRODUCT relationship. *Picasso* refers to a painting in the sentence and not to Picasso as a human being. Example (8) is '*Wall Street* is in a panic', which uses the PLACE FOR THE INSTITUTION relationship. The term *Wall Street* refers to the famous stock market located in New York. In short, each connection between vehicle and target occurs in a single concept, and each has a conceptual relationship such as the PART FOR THE WHOLE. These relationships are known to many and are common in our society (Lakoff & Johnson 1980).

In short, CMT explains that metaphor and metonymy are the same conceptual phenomena but have slightly different understanding processes: metaphor is understanding one kind of thing in terms of another, while metonymy is understanding one entity as standing for another. The metaphorical primary function is similarity, while the metonymic primary function is contiguity, and they include a mapping process from source (vehicle) to target. All this knowledge is comprises the fundamental features of conceptual metaphor and metonymy, and it is important for understanding figurative expressions.

Other researchers have developed on Lakoff and Johnson's (1980) theory and attempted to define metonymy more precisely using the theory of Idealised Cognitive Models (ICMs) (Lakoff 1987; Radden & Kövecses 1998, 1999), referential point construction (Langacker 1993) and domain highlighting (Croft 1993). I briefly review other metonymic studies and discuss the issues of metonymic theory in the following sections.

2.2.2 Frames, Domains and Idealized Cognitive Models

According to the literature, it is widely believed that metonymy works by contiguity and has tried to capture this in terms of frames, domains and ICMs. These notions involve relatively complex knowledge structures, and word meaning cannot be understood independently of this

vast repository of encyclopaedic knowledge structure. I briefly explain these three notions here and then consider metonymic operations.

According to Fillmore (1977, 1982), the basic idea of a semantic frame is ‘a schematisation of experience (a knowledge structure) which is represented at the conceptual level and held in long time memory and which relates elements and entities associated with a particular culturally embedded scene situation or event from human experience’ (Fillmore as cited in Evans and Green 2006:222). Given words and grammatical constructions are relativised to their frames; that is, the meaning associated with a particular word or grammatical construction cannot be interpreted without access to all the essential knowledge that relates to it. For instance, in order to understand the word ‘buy’, people need to understand other related elements, such as ‘goods’, ‘buyer’, ‘seller’ and so forth. Fillmore (1985) uses the terms ‘figure’ and ‘ground’ to distinguish between a particular lexical concept and the background frame. The figure is the specific meaning designated by a lexical item while the ground is a salient subpart of a larger frame in which the figure is understood. Therefore, the frame represents a complex knowledge structure that allows us to understand a given word and a group of related words and that provides licence for their grammatical behaviour in sentences.

A domain is related to the notion of a frame. Langacker (1987) establishes a theory of domain that rests on the assumption that lexical concepts are always understood with larger knowledge structures and that meaning is encyclopaedic. Domains are 'cognitive entities constituting the context relative to which a lexical unit can be characterised' (Langacker as cited in Rudzka-Ostyn 1985:238). Langacker addresses basic and abstract domains. For example, space and time are basic domains, which derive directly from the nature of our embodied experience; non-basic domains are called abstract domains. Abstract domains are more complex in nature than basic ones although they are ultimately derived from embodied experience, and an abstract domain is essentially equivalent to an ICM and a frame. For example, ‘elbow’ is more complex than ‘arm’ because, in order to understand ‘elbow’, people require knowledge of the domain of ‘arm’, but ‘arm’ is not a basic domain, so people must consider the domain of ‘arm’ and then the domain of space, which is a basic domain. In other words, an abstract domain is ‘any concept or conceptual complex that functions as a domain for the definition of a higher-order concept’ (Langacker 1987: 150).

A domain matrix is a set of possible domains. Individuals use this domain for understanding of a concept, which is the network of domains that underlies the concept. For

instance, a certain concept, like human being, consists of or relates to more than one domain, such as physical objects, living entities, and many others (Croft 1993). According to Croft (1993), 'the notion of a domain matrix represents the combination of domains is simultaneously presupposed by a concept' (Croft 1993:345). Croft uses two theories, Langacker's (1987) domain theory and the encyclopaedic view of meaning, and argues that metaphor needs an association across two distinct domain matrices, while metonymy highlights an aspect of a single domain matrix. Thus, on different occasions, people can highlight distinct domains within a given domain matrix. See the following section for more detail.

Lakoff (1987) introduces ICMs, which are 'a relatively stable mental representation that represents a "theory" about some aspect of the world and to which words and other linguistic units can be relativized' (Lakoff as cited in Evans 2007: 104). In this respect, ICMs and frames are very similar since both notion deeply relate to complex knowledge structures. However, ICMs do not represent a specific aspect of a given experience rather than that, ICMs capture relevant aspects of reality and can explain some of the typical effects of categorisation since they are highly abstract frames and rich conceptual structures. For example, the lexical concept [BACHELOR] is understood with a marriage ICM. It comprises the knowledge that bachelors are unmarried adult males who expect to marry soon or at a certain age and includes information related to marriage age, the social, legal, religious and moral dimensions and responsibilities associated with marriage and so forth. Some members of 'bachelor' can be better or more typical examples; for example, the Pope is a bachelor but cannot be a typical example because Catholicism requires the Pope to be unmarried. In this case, the source of particular typicality effect arises (Lakoff 1987; Evans and Green 2006). Based on this, I briefly introduce the received view of metonymy in the next section.

2.2.3 Metonymic Idealised Cognitive Models

Idealised Cognitive Models (e.g., Lakoff 1987, 1993; Radden & Kövecses 1999) have adhered to and developed on CMT. According to ICMs, a word is always based on a complex conceptual knowledge structure. Therefore, in order to understand a word properly, individuals should take into account its background such as culture, society or customs. This knowledge comprises idealised or simplified conceptual structures with rich and abstract information based on our experiences. Metonymy can be described as two closed entities related to each other in

the same ICM. This approach uses ICMs instead of domains, and the nature of these models is similar to a category or cluster model. An ICM itself represents the same as a whole category or entire cluster, in which a sub-category or a part of the cluster stands for the whole category or entire cluster in the same way as a part of an ICM stands for the whole ICM.

In more detail, this approach divides metonymic expressions into three types: i) WHOLE FOR PART, ii) PART OF WHOLE and iii) PART FOR PART relationships. Both i) WHOLE FOR PART and ii) PART OF WHOLE include ICMs such as THING AND PART, SCALE, CONSTITUTION, EVENT, CATEGORY AND PROPERTY and REDUCTION. I illustrate this in the examples below.

The THING AND PART ICM is a typical metonymy, in which a whole thing refers to its part or a part refers to the whole. For example:

(9) *America* for United States (Radden & Kövecses 1999)

(10) *England* for Great Britain (Radden & Kövecses 1999)

The example of '*America* for United States' uses a WHOLE THING FOR A PART OF THE THING relationship. 'America' originally meant both North and South America, but people often use it to mean only the United States, which is a part of America. On the other hand, '*England* for Great Britain' is an example of a PART OF A THING FOR THE WHOLE THING relationship. *England* is a part of Great Britain, which also includes Wales and Scotland.

The SCALE ICM uses a scale with upper and lower ends, such as high and low, or with positive and negative ends, such as good and bad, that is, the scale ICM can be generally described as two poles with a middle value or average level. For example:

(11) Henry is speeding again (Radden & Kövecses 1999)

(12) How old are you? (Radden & Kövecses 1999)

Example (11), 'Henry is speeding again', means 'Henry is going too fast' and uses the WHOLE SCALE FOR THE UPPER END OF THE SCALE relationship. The word 'speed' originally means the whole of velocity, but 'Henry is speeding again' refers to the upper end, 'too fast'. Example (12), 'How old are you?', means 'What is your age?' It uses the UPPER END OF A SCALE FOR THE WHOLE SCALE relationship. The word 'old' means 'not young' or 'not new', referring to the

upper end of the scale, but 'How old are you?' refers to the whole scale of ages (Radden & Kövecses 1999).

So far, I have mentioned two types of conceptual relationships, i) WHOLE FOR PART and ii) PART OF WHOLE. I now consider the third type of relationship given above, the PART FOR PART ICM. It is described as a relationship between a part and a part based on contiguity in the same ICM. It includes several types of ICMs such as PRODUCTION, POSSESSION, LOCATION and so forth. Some of these are mentioned below. An ACTION ICM involves several kinds of entities such as participants, instruments, motions (destinations) and results that relate to each other in a certain action ICM. For example:

(13) To author a book (Radden & Kövecses 1999)

(14) Writer (Radden & Kövecses 1999)

The first example, 'to author a book', means 'to write a book'. The word 'author' originally means someone who has written a book, but, in this context, the word 'author' means the action of writing a book, using the AGENT FOR ACTION ICM. In the 'writer' example, the word means someone who writes books or stories, which uses the ACTION FOR AGENT ICM.

The CAUSATION ICM is described as a cause-and-effect relationship. For example:

(15) Health complexion (Radden & Kövecses 1999)

(16) Slow road (Radden & Kövecses 1999)

The expression 'health complexion' means 'the good state of health bringing about the effect of a healthy complexion'. This is an example of the CAUSE AND EFFECT ICM. The expression 'slow road' means 'a road which tends to make the traffic on it slow', which uses the EFFECT FOR CAUSE ICM.

Radden & Kövecses (1999) claim that there are some cognitive principles in metonymies, which are mainly governed by three types of cognitive principles: (i) human experience, (ii) perceptual selectivity and (iii) cultural preferences. The principle of human experience includes HUMAN OVER NON-HUMAN, SUBJECTIVE OVER OBJECTIVE, CONCRETE OVER ABSTRACT, INTERACTIONAL OVER NON-INTERACTIONAL, RELATED TO THEIR FUNCTION AND FUNCTIONAL OVER NON-FUNCTIONAL. All these principles are related to our experience. The

principle of perceptual selectivity includes IMMEDIATE OVER NON-IMMEDIATE, OCCURRENT OVER NON-OCCURRENT, MORE OVER LESS, DOMINANT OVER LESS DOMINANT, GOOD GESTALT OVER POOR GESTALT, BOUNDED OVER UNBOUNDED and SPECIFIC OVER GENERIC. These principles are all based on our perception. The principle of cultural preferences includes STEREOTYPICAL OVER NON-STEREOTYPICAL, IDEAL OVER NON-IDEAL, TYPICAL OVER NON-TYPICAL, CENTRAL OVER PERIPHERAL, INITIAL OR FINAL OVER MIDDLE, BASIC OVER NON-BASIC, IMPORTANT OVER LESS IMPORTANT, COMMON OVER LESS COMMON and RARE OVER LESS RARE (Radden & Kövecses 1999). This principle derives from Langacker's (1991: 171, 1993: 30) HUMAN OVER NON-HUMAN, WHOLE OVER PART, CONCRETE OVER ABSTRACT, VISIBLE OVER NON-VISIBLE and so forth. These structure of the metonymical patterns reflects what individuals regard as their bodily experiences, as in the principle (Radden & Kövecses 1999).

In short, the account of metonymic ICMs differs from CMT because it uses a sort of prototypical approach rather than a unitary definition of metonymy in terms of contiguity, which specifies the conceptual nature of the relationships between the two entities, a source and a target. This is one of the essential properties of metonymy: that an entity is mentally activated through another entity in the same ICM. It seems that this account would be the most common definition of metonymy in the literature so far, but it is still criticised for its approach to formulating non-linguistics knowledge, organising between frames, and determining whether the nature of contiguity is a reliant function for metonymy.

2.2.4 Reference Point Construction

Langacker (1991b, 1993) suggests that, from a cognitive grammar perspective, metonymy has reference point construction, which occurs when a speaker refers to a salient point in order to mention a less salient entity in a single domain. This approach stresses the conceptual process rather than the contiguous relationship between a vehicle and a target.

Consider the following examples of discrepancy in reference points:

(17) *He*'s in the phone book (Langacker 1993)

(18) *The arrow* in the tree (Langacker 1993)

Example (17), ‘He’s in the phone book’, is a metonymic expression; his name and phone number appear in the phone book, not the actual individual. The word he refers to his name, and, therefore, this sentence should instead be ‘His name is in the phone book’. He is a more salient point than his name within the domain. In other words, his name should be one of the entities (attributes) of the domain. By using a more salient point, a less salient point can be highlighted. Another example is ‘The arrow in the tree’. A salient point, the arrow, refers to a non-salient point, the tip of the arrow. This discrepancy in reference objects occurs often and is known as ‘the active-zone/profile discrepancy’. In fact, what is being referred to as an object is the tip of the arrow, but the profile is the arrow.

As shown above, Langacker also claims that there are several principles of the salience between a source and a target: HUMAN OVER NON-HUMAN, WHOLE OVER PART, CONCRETE OVER ABSTRACT, VISIBLE OVER NON-VISIBLE and so forth (Langacker 1993). Langacker (1993) suggests that speakers should turn listeners’ attention into their target in a conversation with a communicative purpose, and they should also highlight a clearly verbalised salient point in order to compound the listeners’ cognitive knowledge. Therefore, an important point in the interpretation of metonymy is recognising what the salient thing is among contiguous entities.

However, these salient principles are only a small part. Even though Kövecses & Radden (1998) have added more principles (see previous section), language use is not so simple. It normally relates to several principles when we talk, and which principle is stronger than others depends on the situation. Additionally, these conceptual principles are all asymmetric patterns, which do not allow us to consider symmetry or other patterns of metonymy. More precisely, a principle can only apply to general, conventionalised metonymies and cannot be used for productive metonymic expressions because productive metonymies involve a new conceptual relationship.

2.2.5 Domain Highlighting Model

Croft (1993, 2002) proposes the domain highlighting model for understanding metonymy. There are several (sub) domains in a concept’s domain matrix. In the operation of metonymic understanding, a ‘secondary’ (sub)domain (a target) is mentally activated through another (sub)domain (a source) that occurs in the same domain matrix. This theory stresses the

domain (matrix) rather than a unitary definition of contiguity. Consider the following examples in terms of domain highlighting:

(19) *Time Magazine* is pretty vapid (Croft 1993)

(20) *Time* took over Sunset Magazine, and it's gone downhill ever since (Croft 1993)

The encyclopaedic knowledge of 'Time Magazine' includes printed and online versions and other related information about its contents, journalism, editing, publishing, ownership and so forth. Each of these are called a domain, and the encyclopaedic knowledge of 'Time Magazine' is the domain matrix. 'Time Magazine' in the first example highlights content in the 'Time Magazine' domain matrix, while the second example of 'Time' highlights the company that produces 'Time Magazine'. The semantic shift occurs from 'Time Magazine' to content and company in examples (19) and (20), respectively. Therefore, a certain usage of a lexical concept can highlight different domains in the same concept's domain matrix in different scenes and depends on the context. That is, in order to complete the understanding of the sentences, the metonymic word 'Time Magazine' gives rise to the whole structure of the frame and highlights a certain point that relates to other words such as verbs, adjectives and adverbs in that sentence.

According to Croft (1993), example (19) is a literal expression, while example (20) is figurative. In example (19), the vehicle (Time Magazine) activates the target (the content of the magazine), which is an intrinsic entity, while in example (20), the vehicle (Time Magazine) activates the target (publishing company), which is an extrinsic entity. Croft adheres to the definitions of intrinsicness and extrinsicness found in Langackers's idea of centrality. Intrinsicness should involve the notions of conventionality, genericness and characteristicness. Conventionality is the general knowledge that conventionalised information is found in a speech community. There is an agreement in society that a certain word has a particular meaning, and people can communicate successfully using the word. For instance, people in a certain community have conventional knowledge regarding to 'banana'. In the community, some people have bananas with their lunch or eat them as a snack between meals. An example of non-conventional knowledge is that you ate bananas in the morning, which gave you indigestion (Evans and Green 2006).

Genericness is the knowledge of general information that can be shared within a speech community. It applies to many instances of a particular category and therefore has a good

chance of being conventional (Evans and Green 2006:218). For example, the expression ‘some people have a cat allergy’ is highly generic because it is widely known that some people have a cat allergy; ‘my colleague has a strong allergy to cats’ is more specific because it is about a specific person, ‘my colleague’. We cannot justify whether that person is usually allergic to cats.

Characteristicness is unique to the class of entities and sufficient to identify a class or member. For instance, the shape of a cat is more characteristic than the colour of a cat, even though shape is not always characteristic. If individuals see the shape of a cat, they can immediately imagine a cat in their minds, whereas if they see the colour of a cat—for example, black, white and brown—they cannot immediately imagine a cat (Langacker 1987).

These three areas of knowledge are related to the notion of centrality, since the more salient knowledge is, the more central it is to the meaning of a lexical concept. For example, a banana has a distinctive curved shape. This is conventional, generic, intrinsic and characteristic. Therefore, a distinctive curved shape is highly salient and central to one’s knowledge about bananas and to the meaning of the lexical concept ‘banana’. On the other hand, if a person peels a banana and finds a maggot inside, this is non-conventional, specific, extrinsic and non-characteristic. This is much less salient and less central to the person’s knowledge about bananas. Therefore, intrinsic entities are relatively central concepts (literal), while extrinsic domains tend to be non-central concepts (figurative).

Therefore, domain highlighting is a metonymic definition that involves a shift of reference. Croft (2002) stresses the domain matrix instead of domain approaches. An abstract concept is often connected to other related concepts, that is, it is not always clearly independent as a single concept that has a very complex domain structure or matrix. This approach successfully addresses the issue of metonymy that cuts across domain boundaries, but it does not solve all domain problems. For instance, domains do not consist of strictly separated configurations of knowledge and often overlap and interact in different, complex ways.

2.2.6 Prototypical Approach to Metonymy Based on Referentiality

Continuing the discussion of the metonymic approach, Barcelona (2003) stresses the conceptual nature of entities in terms of the function of referentiality. He proposes that there

are at least three basic degrees of metonymicity. He uses a prototypical approach divided into three types of metonymy: (i) prototypical metonymy, (ii) purely schematic metonymy and (iii) simply typical metonymy. According to him, there is a continuum of metonymicity based on referentiality.

Prototypical metonymy is the highest basic degree of metonymycity and a highly typical referential metonymy. Both the source and target are clearly separated entities, but the source refers to a target within a single domain. According to Barcelona (2003, 2011), referential metonymies seem to function as basic-level cognitive reference points on the continuum of metonymicity. He claims that:

> [R]eference is the primary pragmatic purpose of metonymies for individuals; in fact it is on the basis of referential metonymies for individuals that the very notion of metonymy arose in rhetoric and linguistics. Their referential role is readily perceived by the average speaker. The usual question to be expected from a hearer, if a referential metonymy has not been used quite felicitously by the speaker, is what/who do you refer to ("what/who do you mean")? (Barcelona 2011:21-2)

Therefore, according to Barcelona, referential metonymy is more prototypical and foundational than other types of metonymies.

Purely schematic metonymies are basically the same as conceptual metonymies, which map between a source and target by a pragmatic connection that is mentally activated. They are extremely common but different from the prototype of the metonymy (Barcelona 2003, 2010). This metonymy occurs irrespectively of its referential or non-referential nature and its neat distinctiveness of source and target satisfies the minimal requirement for every conceptual metonymy.

Simply typical metonymies are similar to schematic metonymies whose targets are neatly distinct from the sources, such as WHOLE FOR PART, PART FOR WHOLE and PART FOR PART. Typical metonymies are those closest to the basic-level prototype on the metonymicity continuum. Like in prototypical metonymies, targets in typical metonymies must also be clearly distinguishable from their source; however, unlike in prototypical metonymies, typical metonymies are not restricted to metonymies for individuals, nor do they have to be referential (Barcelona 2011).

Barcelona also claims that many metaphors are motivated by metonymy. Consider the following example:

(21) He fell in the war (Barcelona 2003 [Bultinck 1998])

It is difficult to determine whether this example is metaphorical or metonymic. In the metonymic interpretation, a conventionally imagined soldier engaged in a war and fought with the enemy. During the war, he was seriously wounded, fell to the ground and finally died in the war. This is A SALIENT EVENT (FALLING) FOR A SALIENT SUBSEQUENT EVENT (DYING) relationship. On the other hand, if the speaker is simply referring to the fact that the soldier died at war, this is the metaphorical interpretation. In this case, the speaker is not taking into consideration the soldier's situation, such as whether he actually fell down before dying. The domain of falling is a metaphorical source, and the domain of dying is a metaphorical target. We can understand the knowledge of falling and dying in war, but it is difficult to determine whether both are in the same domain or in two different experiential domains (Barcelona 2003).

2.2.7 Prototypical Approach to Metonymy Based on Contiguity

Continuing the discussion of the prototypical approach, Peirsman and Geeraerts (2006) also claim that contiguity is an important notion of metonymy. They consider prototypical theory rather than unitary theory and claim that metonymy can be divided into three types: prototypical, typical and less prototypical. Before explaining these types, they claim that metonymy is a prototypically structured concept, and the following features are important for interpreting metonymies: i) strength of contact, ii) boundedness and iii) domain. Strength of contact is explained by how two entities relate to each other. There is a degree in the strength of contact. The strongest contact is in a SPATIAL PART-WHOLE relationship, followed by containment, contact and adjacency, in that order (see Figure 2.1). Consider the following example:

(22) Tony Blair is the Prime Minister of England (Peirsman & Geeraerts 2006)

This metonymic sentence uses the SPATIAL PART AND WHOLE relationship. 'England' refers to the United Kingdom of Great Britain and Northern Ireland. That is, 'England' is a part of the UK and cannot be easily spatially separated from the UK. Another dimension of classification is *boundedness*, which is 'involving an extension of the part-whole relationship to unbounded wholes and parts' (Peirsman & Geeraerts 2006: 269). If a relationship between a vehicle and target is bounded, they have a stronger contact than in an unbounded relationship. This notion is deeply related to the previous dimension, *strength of contact*. For example:

(22) Tony Blair is the Prime Minister of England (Peirsman & Geeraerts 2006)

(23) There are cats all over the world (Peirsman & Geeraerts 2006)

Example (22) is a bounded parts-whole metonymy because the two entities (Tony Blair and England) are bounded as proper nouns. On the other hand, example (23) has an unbounded relationship since 'the cat' is unbounded as a mass noun. In this case, the strength is weaker than count or proper noun.

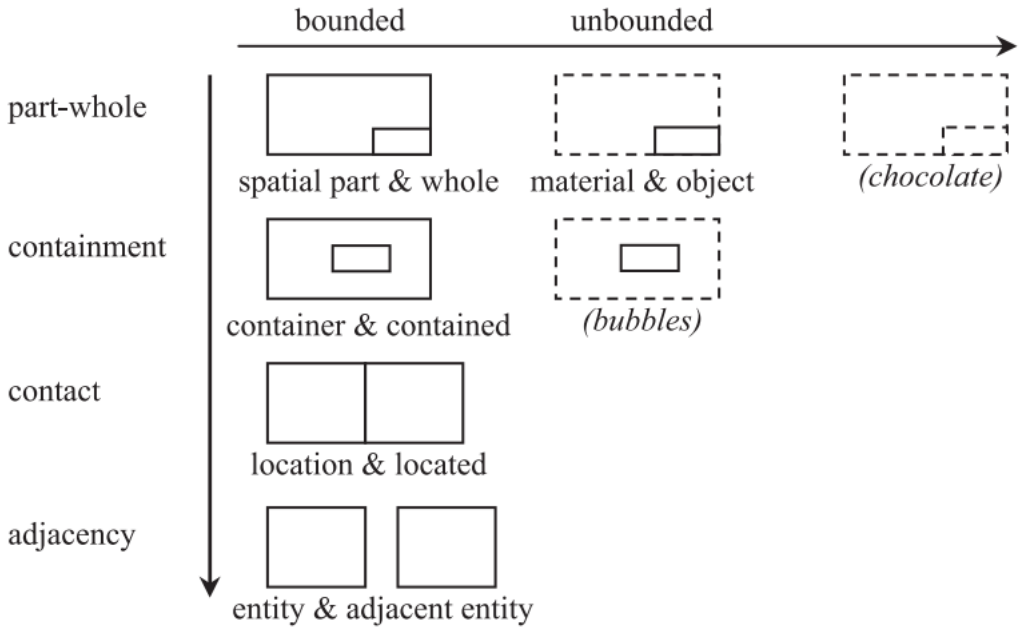


Figure 2.1 Metonymical patterns in the special and material domain (adapted from Peirsman & Geeraerts 2006)

The final dimension is *domain*. Contiguity in the temporal domain should be considered, since 'the meaning shift from space to time is ordinary elsewhere' (Peirsman & Geeraerts 2006: 289). Prototypical metonymy tends to regard part-whole relationships between bounded entities in a spatio-temporal domain. There is also degree in domain. Look at Figure 2.2. The tie between temporal part and whole is very strong, followed by containment in time and entity, and contact in antecedent is the third (Peirsman & Geeraerts 2006). Consider the following example:

(24) 9-11 will never be forgotten (Peirsman & Geeraerts 2006)

Example (24) involves a time domain. The date 9-11 refers to the events that happened on that date, the terrorist attacks on the United States on 11 September 2001. That is, 9-11 happened in a time's container.

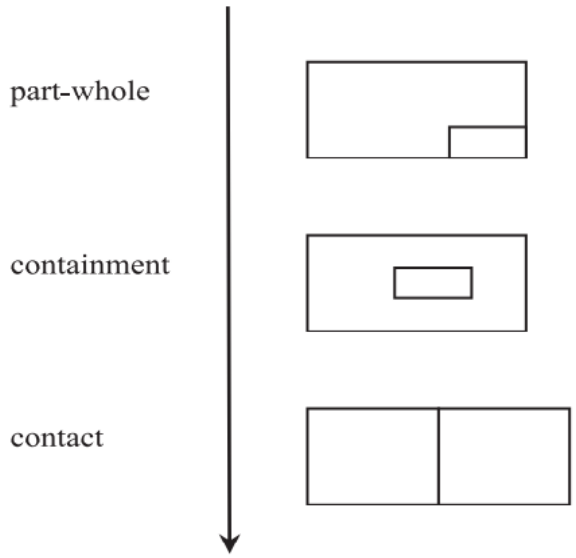


Figure 2.2 Metonymical patterns in the temporal domain: preview (adapted from Peirsman & Geeraerts 2006)

As such, expressions that have these three dimensions are prototypical expressions. Consider the following examples:

(25) Carton (Peirsman & Geeraerts 2006)

(26) We need some good heads on the project (Peirsman & Geeraerts 2006)

(27) Putting a king on the throne (Peirsman & Geeraerts 2006)

(28) Mary speaks Spanish (Radden & Kövecses 1999)

In example (25), 'carton' in French is used as the conceptual relationship 'cardboard for cardboard box' (Peirsman & Geeraerts 2006). The example involves a MATERIAL FOR OBJECT relationship, which includes a high degree of strength of contact but a low degree of boundedness between source and target. That is, this is a less prototypical metonymy. Example (26), 'We need some good heads on the project', is a prototypical metonymy and mainly includes *spatial* PART FOR WHOLE relationships between the two entities, including strength of contact and a high degree of boundedness. Example (27), 'Putting a king on the throne', is a non-prototypical metonymy that mainly includes one kind of SUBEVENT FOR COMPLEX EVENT in a PART FOR WHOLE relationship, which includes a high degree of strength of contact and boundedness between a source and a target except for NON-SPATIAL and NON-MATERIAL PART FOR WHOLE relationships. Example (28), 'Mary speaks Spanish', is the other type of non-prototypical metonymy that includes ACTION, EVENT, PROCESS and STATE relationships. This has a high degree of strength of contact but a low degree of boundedness between source and target. Actions, events and processes are temporally bounded, while states are temporally unbounded.

As shown above, the metonymic link between a source and its target varies in strength. The strength of a metonymic link is related to how conceptually close source and target are to each other. When there is a conceptual distance between metonymic source and its target, the metonymic link becomes weak and the metonymic connection is also weak and vice vasa. According to Peirsman and Geeraerts 2006 and other researchers, this factor of the strength is important factor for characterising metonymy.

2.2.8 Summary of the Prototypical Approach to Metonymy

Both prototypical views of metonymy (Barcelona 2003; Peirsman & Geeraerts 2006) can cover a range of different types of metonymies. The prototypical approach of metonymic referentiality and contiguity is one type of metonymic approach and might be reasonable since it can automatically be divided into metonymic expressions based on referentiality or contiguity. This is because, in order to separate it from metaphor, the strength and boundedness between source (vehicle) and target are very important notions for metonymy because it seems that the alignment between source (vehicle) and target appears in metonymic operations. However, although metonymy has a link between metonymic source (vehicle) and target in a single domain, which plays a very important role in metonymy, whether something is metaphor or metonymy cannot necessarily decided by only one function such as referentiality or contiguity.

2.2.9 Summary of the Received View of Metonymy

In short, researchers agree that the idea of metonymy is a conceptual phenomenon in which one entity can be associated with another entity in the same domain and the linkage between source (vehicle) and target survives. These accounts more or less describe metonymic phenomena, but scholars have mainly considered cases in which metonymic expressions are ideal, social and stereotypical; other types of metonymic expressions tend not to be accounted for or are rarely focussed on. This is because some metonymic expressions do not include the functions of contiguity or referentiality, and there is no clear-cut distinction between metaphor and metonymy. The next section considers these issues of metonymic understanding by showing some other metonymic accounts.

2.3 Reconsidering Approaches to Metonymic Theory

In this section, I examine issues of metonymic understanding. Many researchers agree on the big picture of metonymic interpretation, but there are some properties where researchers disagree. This section considers problematic points in the metonymic principles and the distinction between metaphor and metonymy.

2.3.1 Function of Contiguity

Many researchers have discussed the idea that metonymy is motivated by the notion of contiguity. During the process of metonymic understanding, the word linked to the vehicle concept is transferred to the target concept. The target and vehicle concepts are quite often related to each other in conceptual clusters that have been described as frames, scenes, ICMs and so forth. Since metonymic operation is completed in a single domain (entity), the two are conceptually close to each other. As a result, contiguity is defined as a metonymic feature.

There are several types of contiguity. For example, referential contiguity (e.g., Langacker 1993; Norrick 1981; Radden 2000) includes part-whole relationships, which represent the core of contiguity. Contiguity occurs in a number of objective relationships, such as SPATIAL, CONTAINMENT and CONTENT PART-WHOLE relationships, that exist in the referential world. Other researchers (e.g., Croft 1993; Dirven 2002; Feyaerts 1999; Peirsman & Geeraerts 2006) have considered that metonymic meaning shifts with the conceptual process of construction rather than with objective relationships, such as PART FOR WHOLE, which is the function of conceptual contiguity. As such, there are several interpretations of metonymic understanding in terms of contiguity, but it seems that there is no convincing definition of metonymic contiguity.

For example, Croft (1993) and Peirsman & Geeraerts (2006) have different opinions on the notion of contiguity. Peirsman & Geeraerts stress the physical contact of contiguity and propose a prototypical approach. Metonymies can be divided into three types: i) prototypical, ii) typical and iii) less prototypical, based on *the strength of contact.* For example, if a sentence includes SPATIAL CONTIGUITY, it should be the most prototypical function of metonymy. However, Croft (1993, 2002, 2006) disagrees with Peirsman & Geeraerts and with the notion of *the strength of contact* in particular. Consider the following examples:

(29) There is *a Swiss Army Knife* and *a Pillow* next to each other (Croft 2006)

(30) I'm leaning against *the Swiss Army Knife* (Croft 2006)

(31) I'm leaning against a *pillow* (Croft 2006)

Example (29), 'There *is a Swiss Army Knife* and *a Pillow* next to each other', has physical contact (spatial contiguity) between *Swiss Army Knife* and *Pillow*. If the two objects, *Swiss Army Knife* and *Pillow*, establish the physical contact of contiguity, a speaker can make two sentences:

(31) I'm leaning against a *pillow* (Croft 2006)

(32) *I'm leaning against the *Swiss Army Knife*[1] (Croft 2006)

According to Peirsman & Geeraerts (2006), if *Swiss Army Knife* and *Pillow* have contiguity spatially, 'I'm leaning against the *Swiss Army Knife*' could be a prototypical metonymy. However, this sentence does not make sense (Croft 2006). Croft casts a doubt that physical contiguity might be included in metonymy because the set of physical contiguity takes place many times; then, the situation can become a recurring experience in the mind. However, the relationship between the *Swiss Amy Knife* and *Pillow* is not yet conceptual in this context; therefore, example (32) cannot be categorised as metonymy. As a result, physical contiguity cannot be a metonymic function itself. For the sentence to be a metonymic expression, the relationship between the *Swiss Amy Knife* and *Pillow* must acquire conceptual contiguity through a recurring experience (Croft 2006).

It seems that setting up conceptual contiguity in our minds is difficult because it should be based on our experiences and must be conventionalised in a community. In other words, in order to satisfy metonymicity, the function of contiguity should include an element of common sense (e.g., England for United Kingdom) and should be easy to perceive. One should be able to imagine a relationship pattern between the two entities (e.g. The ham sandwich has asked for the bill).

2.3.2 Primary Entity and Secondary Entity

The distinction between primary and secondary entities is also a controversial issue in the literature. In a metonymic operation, defining the border between primary and secondary entities is important because it is directly related to the difference between literalness and

[1] Asterisk mark shows a wrong or controversial sentence.

metonymicity. When linguistic vehicles associate with their primary entities, they have a literal meaning; when linguistic vehicles associate with their secondary entities, they have a metonymic meaning. However, there is no reasonable method to distinguish primary and secondary entities, and metonymic vehicles and targets are closely related to each other in the same domain. There is some discussion about this as to how to identify primary and secondary domains. Consider the following examples:

(33) The *book* is very large (Barcelona 2011)

(34) The *book* is a history of Iraq (Croft 1993)

Normally, the primary entity includes physical content such as largeness and quantity, and the secondary entity includes an abstract (functional) aspect. Croft (1993) claims that neither example is a metonymy because both 'a history of Iraq' and 'very large' belong to a primary concept in the domain matrix. 'The *book'* constitutes many elements such as material, size, weight, colour, content, author, publisher and so forth. Size is a general element, while the content of the book is also an essential element in the book. According to Croft, both the size of the book and the content of the book belong to the primary domain. Therefore, Croft does not group example (33), 'The *book* is very large', and example (34), 'The *book* is a history of Iraq', as metonymies.

However, Ruiz de Mendoza (2000) claims that the first example is a metonymy but the second example is not. Ruiz de Mendoza has a different idea, namely that the notion of extrinsicness is not the fundamental factor that characterises secondary subdomains. He claims that the notion of primary and secondary domains is not exactly the same notion as centrality and non-centrality. Although secondary domains tend to be less central than primary domains in a domain matrix, extrinsicness sometimes forms the centrality in a domain matrix. Factors used to identify a central or less central entity are (i) conventionality, (ii) characteristicness and (iii) genericness shared with a speech community (Langacker 1987). This means that a primary domain (physical elements) is always located in the central domain matrix, and a secondary domain (abstract [functional] aspect) is always located in the non-central domain matrix.

Ruiz de Mendoza (2003) follows Langacker's definition and claims that books do not always refer to only history, and history is not specific or common to books but also used in TV programmes and films. Ruiz de Mendoza states that 'books are not conventionally histories;

being a history is not unique to the class of items designated by 'book', and it is not generic knowledge that books are histories'. (Ruiz de Mendoza 2003: 127). From this perspective, being 'very large' is a fairly central feature of the book, so this is not metonymy. On the other hand, 'history of Iraq' is not an essential element for a book and is a more peripheral feature of books; therefore, this is metonymy. Therefore, in opposition to Croft (1993), the abstract (functional) aspect (history of Iraq) does not necessarily belong to a primary domain.

Barcelona (2011) claims that both examples 'The book is a history of Iraq', and 'The book is very large', are allocated to metonymy. In example (34), the book is the source and the target is the abstract (functional) aspect (history of Iraq). On the other hand, in (33), the book is the source and the target is the physical aspect (very large). Both the abstract (functional) aspect and the physical aspect are in the book domain matrix, which is divided into secondary and primary, respectively. That is, (34) belongs to the secondary domain, while (33) belongs to the primary domain. In this sense, it sounds like example (33) is not a metonymy. However, according to Barcelona, (33) is still peripherally metonymic. This is because the target part (physical aspect/a very large) can be distinguished from the source whole (the book), like in PART-FOR-WHOLE metonymy, and the source at least activates the target in the mind. Therefore, (33) still meets metonymic conditions. As a result, defining a central (primary) domain and less central (secondary) domain is still problematic in linguistics. Example (34), 'The book is very large', is easy to determine to be a metonymy because 'very large' is a physical aspect of the book that is easy to perceive and estimate (small-large); it is common and basic knowledge to us. Therefore, 'the book' is a whole entity and refers to a part, a physical aspect of the book. This is metonymic. However, in example (34), 'The book is a history of Iraq', 'the book' refers to the content of the book. Content is an abstract entity and includes several kinds of genres such as mystery, romance, fantasy, documentary, history, poetry, textbooks, photo books and so on. It is difficult to say that the content of history is a typical book content or that history is not a typical book content.

Note that although it is often debated which entity, physical or semantic, has the most central meaning to a given lexical concept, this thesis takes the position that both entities can be one of the primary cognitive models (see Chapters 3 and 4 for more detail).

2.3.3 Superordinate Domain and Subordinate Domain

The distinction between a superordinate domain and a subdomain is an important issue in identifying domains. Superordinate and subordinate domains generally describe category-level information, where a superordinate domain refers to inclusive information, while a subdomain refers to less inclusive information. One example is the word CAR. 'Car' can be associated with a category of vehicle and, more precisely, can also be associated with a sports car. They can be categorised as a superordinate domain and subordinate domain, respectively. In the received view of figurative expressions, a metaphorical source domain and a target domain belong to different superordinate domains, while a metonymic vehicle (one subordinate domain) and a target (another subordinate domain) are associated with each other within the same superordinate domain. Metonymic and metaphorical understanding is extremely reliant on the operation of distinguishing two (sub)domains. That is, in order to distinguish metaphor from metonymy, the border between the two (sub)domains must be clearly separable. However, there are some linguistic expressions that are less readily identifiable as having either superordinate domains or subdomains. Consider the following example:

(35) Achilles is a lion (Black 1981)

This is known as a common metaphor, which is made from the conceptual metaphor PEOPLE ARE ANIMALS. This includes the PEOPLE (target) and ANIMALS (source) domains, which are in categorically different taxonomic domains. However, from another perspective, this sentence can also be seen as metonymy. Many scholars (Lakoff and Turner, 1989; Lakoff, 1993; Barcelona 2000) propose that for a phrase to be a metaphor, both source and target domains have to belong to different superordinate domains. However, the source and target in this sentence might be in the same superordinate domain such as CREATURE or LIVING THING. In this light, this sentence can be seen as metonymy, because metonymy should have two entities (a source and a target) within a single superordinate domain.

Gibbs (1994) and Goossens (1995) have proposed some tests to identify whether two entities are in the same domain. The purpose of these tests is to show the cutting point of domains. When 'is like' or 'as if' is inserted into an 'A is B' expression, a metaphor does not change its meaning, since a metaphor already involves two different categories. Other expressions are not metaphorical. Consider the following examples:

(35) Achilles is a lion (Gibbs 1994 [Black 1981])

(35-a) Achilles is like a lion (Gibbs 1994 [Black 1981])

(35-b) As if Achilles is a lion (Gibbs 1994 [Black 1981])

The expressions (35-a) and (35-b) are meaningful because (35), (35-a) and (35-b) have the same meaning, namely that Achilles seems like a lion, not that Achilles is a real lion. If (35-a) and (35-b) were not meaningful, the sentence would not be a metaphor, since the relationship between source and target would collapse. That is, (35) is determined to be a metaphor by applying the 'is like' and 'as if' tests.

Both tests intuitively tell us whether the two (subordinate) domains are in the same or different domains. Nevertheless, these tests only deal with linguistic phenomena (language use and grammatical form, etc.) and do not include non-linguistic phenomena such as the relationship between language and conception and the background of a conversation (situation). Individuals should consider more conceptual networks in their non-linguistic knowledge rather than superficial language use.

In short, the distinction between superordinate and subordinate domains is relatively easier to identify than the distinction between primary and secondary entities (subordinate domains). However, there is still an obstacle to finding the border between superordinate and subordinate domains, and there is no reasonable explanation for this.

2.3.4 Functions of Contiguity and Similarity

Another issue is the fact that contiguity is different from the notion of similarity. In the received views of metonymy and metaphor, contiguity is considered a metonymic function, whereas similarity is a metaphorical function. However, some expressions show a relationship between two entities that cannot be clearly determined to be either contiguity or similarity because these two notions are sometimes extremely close to each other.

For example, Warren (1999) focusses on the attribution of metaphor and metonymy. She claims that a similarity (resemblance) between a vehicle and a target is also considered a kind of contiguity because if A has a resemblance to B, their attributions or characteristics might be close to each other. Consider the following example:

(36) Ann has her mother's [eyes like those of her mother] (Warren 1999)

This is a family-inherited example. The sentence has a referential function, in which Ann refers to her mother's eyes. This sentence describes physical similarities—eyes—but also closeness behind the scene, or a blood relationship. That is, it can be said that this sentence has both a function of similarity and contiguity, and, therefore, it is hard to determine whether this is metaphor or metonymy. Warren states that,

> [The] crucial difference between referential metonymy and metaphor is that in the case of referential metonymy the link between trigger and target is a relation (and one relation only), whereas in the case of metaphor, in involves one or more attributes. (Warren 1999:131)

It is possible to interpret 'Ann's eyes' as having been inherited from 'mother's eyes' by the blood relationship without mentioning precise parts such as shape, colour and size; that is to say, they have eyes that wholly resemble each other. In these terms, this example can be a metaphor. From another perspective, if there is only one item shared between Ann's eyes and her mother's eyes, such as the eyes' shape, size or colour, individuals can categorise the example as a metonymy. However, it seems to be difficult to identify how many attributes are included in the relationship between a source (vehicle) and a target. Individuals do not often describe a particular point of similarity among family members. People also alternatively use abstract expressions such as atmosphere, voice or way of speaking. Therefore, even though Warren's idea of a number of attributions can apply to this family-inherited expression and hold true, it still remains ambiguous because this sentence has both physical resemblances, which are a sign of metaphor, and closeness behind the scene, which is a sign of metonymy. Therefore, Warren's approach cannot be clearly defined in the unified account of metonymy based on contiguity or in the unified account of metaphor based on similarity.

Barnden (2010) raises a similar doubt, to the effect that one sentence can have both metaphoric and metonymic meanings. Consider the following example:

(37) There's a snake on the left-hand side of the drawing (Barnden 2010)

According to Barnden (2010), the metaphorical case is when the speaker uses 'snake' to describe a wavy line in the drawing. The drawing can be entirely non-representational. The metaphor is essentially the same as when one says a road is snaking across the land. That is, in the sentence, the phrase 'a snake' is to be taken as a referential metaphor, referring to a drawn line. The metonymic case is when the speaker means that (say) a wavy line on the left-hand side of the drawing is a representation of a snake (the drawing might be of a jungle scene). Here we have a form of 'representational' metonymy. The phrase 'a snake' can be thought of as paraphrased as 'something in the drawing that represents a snake'. That is, there are two concepts (snake and wavy line) in both the metaphoric case and the metonymic case, and in both cases representation or similarity operates between the two concepts.

It seems that in most metonymies, there is a contiguous relationship between the source and target, but the notion of contiguity has not yet been completely agreed upon by all researchers since there are some examples that can include both similarity and contiguity. As a result, contiguity is not a unique function for metonymy.

2.3.5 Function of Referentiality

It is well known that referentiality is one of the metonymic functions in which one entity refers to another entity. However, there are some issues with the metonymic function of referentiality. For example, Barnden (2010) suggests that 'referential metaphor is said to occur when a definite noun phrase is used metaphorically to refer to some target item' (2010:7). According to Barnden, if there is a postulated similarity link between a reference point (vehicle) and a reference object (target), and the link is achieved in a single concept, the sentence is a metonymy. On the other hand, when the link is achieved within different concepts, it is a referential metaphorical expression. In short, it can be said that the function of referentiality is not a notion unique to metonymy but can also be found in metaphor. Consider the following examples of referential metaphors:

(38) The creampuff didn't even show up (Gibbs 1990)

(39) Susan sank into a pit of sadness. She stayed at the bottom for many months (Barnden 2010)

According to Barnden, example (38) is a referential metaphor. The target is not seen in the sentences, but individuals can interpret what the target is based on context. In example (38), a 'creampuff' is a type of cake with a soft centre. Individuals interpret the creampuff as referring to an individual human being. By saying that the 'creampuff did not show up', the softness of the cake is used metaphorically to convey a great psychological degree of softness in humans. Physical softness and physical strength are used metaphorically for psychological strength; just as a creampuff is physically weak, it refers to a human that is psychologically weak. Therefore, it can be said that the boxer who has a weak mind is a CREAMPUFF, and the BOXER consequently does not show up at a match.

Example (39), 'She stayed at the bottom for many months', is a referential metaphor based on correlation. The first phrase uses the SADNESS IS DOWN metaphor, which is based on correlation, and in the second sentence, 'the bottom' refers to 'the worst phase of her sadness state'.

The important claim is that Barnden (2010) insists that the term 'contiguity' has a broad sense and therefore is very ambiguous. For example, contiguity sometimes includes a similarity linkage but sometimes a correlation-based linkage as well. Therefore, referentiality is not a unique function for metonymy, and it can be found in metaphor as well. Barnden (2010) suggests that metaphorical and metonymic operations should be considered irrespective of whether they take place within or across domains, instead of analysing how metaphor and metonymy are differentiated between the two domains, since different linguistic examples can create different arrangements of the conceptual connection between the two domains, the source and the target. Barnden (2010) claims:

> [Is] there anything about metaphorical links that should prevent us from regarding them as a special case of contiguity links, at least when they are being used in referential metaphor? […] if contiguity links in general are salient semantic or pragmatic association or salient applications of pragmatic function, is there anything about similarity or correlation base links in referential metaphor that should prevent them from qualifying as contiguities along with other types of salient association/function? (Barnden 2010: 8)

However, Barnden analyses an individual case of a linguistic example and therefore does not provide such a model, as his work is also not concerned with meaning construction.

Therefore, rather than considering function (referentiality, contiguity and similarity), as Barnden mentions, the linkage between source (vehicle) and target should be important. In other words, traditional accounts of metaphor and metonymy often use functions to describe metaphor and metonymy and do not allow us to interpret all types of metaphorical and metonymic expressions.

2.4 Interactions between Metonymy and Metaphor

Recent studies on figurative language and thought (e.g., Barnden 2010; Dirven 1993; Ruiz de Mendoza 2003; Radden 2002; Warren 1999) have provided a new understanding of the relationship between metaphor and metonymy. These studies maintain that, in the understanding operation, metaphorical and metonymic domains do not always provide a clear distinction between source and target, and there are linguistics examples that cannot be allocated as either metaphor or metonymy or are somewhere in between. However, previous studies have only given examples and do not set up analysis or framework, which are necessary for the process of description. This chapter considers these different types of expressions not included in previous studies and a different approach to identifying the relationship between metaphor and metonymy.

2.4.1 Metaphtonymy

Metaphtonymies are different types of figurative expressions that are either metaphor or metonymy or in between (Goossens 1990). According to Goossens (1990), there are three types of metaphtonymy: i) metaphor from metonymy, ii) metonymy within metaphor and iii) demetonymisation inside a metaphor. He suggests that these types of figurative expressions cannot be included as prototypical metaphors and metonymies. The analysis in this thesis complements his claim by using the Lexical Concept and Cognitive Models (LCCM) framework and demonstrates a continuum between metaphor and metonymy (see Chapters 3 and 4 for more detail). Consider the following three examples of metaphtonymy:

(40) “Oh dear”, she giggled, “I’d quite forgotten” (Goossens 1990)

(41) I should/could bite my tongue off (Goossens 1990)

(42) Pay lip service (Goossens 1990)

Example (40), ‘“Oh dear”, she giggled, “I’d quite forgotten”’, is called a metaphor from metonymy (i). The word ‘giggle’ can be understood as having three meanings: a) a literal meaning, to laugh quickly or quietly; b) a metonymic meaning, where ‘laugh’ and ‘say’ are intermingled with ‘giggle’; and c) a metaphorical meaning such as ‘saying as if giggling’. In a metonymic reading, ‘laugh’ and ‘say’ occur as the single concept ‘giggle’, while in a metaphorical reading, ‘saying’ is similar to ‘laughing’ in this context. It seems that the metonymic meaning is set up first and then extends to the metaphorical meaning. Therefore, example (40) is called a metaphor from metonymy (Goossens 1990).

The second example, (41), ‘I should/could bite my tongue off’, can be seen as metonymy within metaphor (ii). Example (41) can be interpreted as having two meanings. One is the literal meaning, a) ‘I should/could bite my tongue off’. The other one is a metaphorical meaning interpreted as b) ‘I am sorry for what I have just said’. The action of ‘bite my tongue off’ means ‘depriving oneself of one’s ability to speak’. This can be connected with ‘punish myself’, so this statement is metaphorical However, since ‘tongue’ refers to ‘the ability to speak’, this metaphorical expression includes the metonymic phrase. Therefore, this is a metaphorical expression, but metonymy is hidden in the metaphor (Goossens 1990). Goossens claims:

> [T]ongue can be processed literally in the donor scene. Because of the counterfactual contextualisation this donor scene can be one that does not directly tie up with everyday experience. Perhaps the best way to characterise it is in terms of self-punishment, where the punishment hyperbolically involves a rather unlikely kind of self mutilation. (Goossens 1990:364)

In similar way, ‘biting one’s tongue’ means that someone bites his/her tongue in order to refrain from revealing some secrets or an embarrassing incident or otherwise speaking his or her mind without actually biting the tongues. That is, to bite one’s tongue metaphorically maps onto ‘to

refrain from revealing a secret (speaking his/her mind)'. Again, 'tongue' refers to 'the ability to speak'; therefore, 'biting one's tongue' is metonymy within metaphor.

Example (42), 'pay lip service', is called 'demetonymisation' inside a metaphor. Example (42) means a) 'supporting in words but not in fact'. At first glance, the lexical concept of LIP stands for SPEAKING, which is metonymic. However, 'lip service' can also mean b) 'service with the lips (and no real effort)', which is metaphoric. In this case, the metonymic relationship between 'lip' and 'speaking' is separated. This is called 'demetonymisation'. Therefore, this example cannot be allocated as either metaphor or metonymy (Goossens 1990).

In short, Goossens (1990) demonstrates that metonymy and metaphor are somehow associated with each other, and there are some examples that cannot be identified as metaphor or metonymy or are in between. In particular, the metaphtonymies above are essentially based on metonymy and develop into metaphor. However, Goossens does not clearly show the theoretical framework for these examples.

2.4.2 Literal/Metonymic/Metaphorical Continuum

Dirven (1993) describes a prototypical approach in terms of the conceptual distance that underlies metaphor and metonymy, which is divided into three conceptual levels: literal, metonymic and metaphorical. Metonymic expressions are divided into three categories: i) pre-metonymy, ii) metonymy and iii) post-metonymy. The pre-metonymic phenomenon includes contextual modulation and frame variation. Both notions derive from Taylor (1995 [1989]) and Cruse (1986). Consider the following examples:

(43) I washed the car

(44) I vacuum the car

(45) I service a car

'Car' can be a contextual modulation that, when individuals say 'I washed the car', means the car's exterior. When individuals say 'I vacuum the car', they are referring to the inside of the car, and 'service a car' focusses on the moving parts (Cruse 1986). This shift in meaning is

called ‘contextual modulation’ or the ‘active zone’, according to Langacker (1993). ‘Frame variation’ represents all kinds of common knowledge. Consider the following examples:

(46) The room has two doors (Dirven 1993)

(47) The workmen delivered the window (Dirven 1993)

(48) Open the door (Dirven 1993)

(49) Close the window (Dirven 1993)

(50) He walked through the door (Dirven 1993)

(51) She put her head through the window (Dirven 1993)

When individuals say in (46) that ‘The room has two doors’ or in (47) that ‘The workmen delivered the window’, these may be conceptualised as unitary structures. On the other hand, (48) ‘Open the door’, (49) ‘Close the window’, (50) ‘He walked through the door’ and (51) ‘She put her head through the window’ are all examples that focus on the movable part of the structure. Therefore, different uses of ‘door’ and ‘window’ have different components of their respective frames. People have knowledge about doors and windows. They know their usual shape, size and manner of construction and about their function and usual location. Dirven (1993) concludes that pre-metonymy, including ‘modulation’ and ‘frame variation’, refers to non-literal and non-figurative expressions.

As mentioned above, Dirven (1993) claims that metonymic expressions are divided into three categories: i) pre-metonymy, ii) metonymy and iii) post-metonymy. Here, I describe the next category of metonymic expressions, ii) metonymy, which includes linear, conjunctive and inclusive metonymies. Linear metonymy has the lowest degree of metonymicity and is always non-figurative and non-literal. Consider the following example of linear metonymy:

(52) Different parts of the country use tea differently (Dirven 1993)

Normally, the expression ‘different parts of the country’ refers to regions or inhabitants there, because it is based on THE WHOLE FOR PART, ‘country for inhabitants’. People can recognise which meaning the speaker is using depending on the context. For example, if people say

‘Different parts of the country use tea differently’, the ‘country’ refers to inhabitants rather than a region. That is, a referential object is very clear in the linear metonymy.

Next is conjunctive metonymy. This is somewhat complicated. There are two types, non-figurative and figurative, in that metonymy. Consider the following examples:

(53) They would have to wait until the *school* broke up (Dirven 1993)

(54) The *Crown* has not withheld its assent to a Bill since 1707 (Kittay 1987)

The word ‘school’ in (53) is an institution that contains several constitutive elements such as teachers, students, lectures and activities. These parts refer to the school as A PART FOR WHOLE or WHOLE FOR PART metonymy. These elements are very close to each other. Therefore, ‘the school’ is recognised as non-figurative in the sentence. On the other hand, the word ‘Crown’ in (54), ‘The Crown has not withheld its assent to a Bill since 1707’, is a figurative sentence. This metonymy is derived from ‘THE CROWN FOR MONARCHY’. The crown, as part of the regalia, is far from the institution of monarchy. The Crown should be a human being, and the conceptual gap between the regalia and the institution of the Crown is greater than that in the example of the school. Therefore, this example is understood as a figurative expression. The last type is ‘inclusive metonymy’. This is also figurative because a source and target have great conceptual distance. Consider the following example:

(26) We need some good *heads* on the project (Dirven 1993)

A head is primarily a physical head, but if the adjective ‘good’ is added, it turns into the mental object of mind, or intelligence. This conceptual distance is deeper than the conjunctive metonymy.

Post-metonymy is originally metonymic and includes semantic extensions that have been generalised and conventionalised so as to no longer depend on the presence of percussion or impact in their referent. Consider the following example:

(55) He had *knocked* about all over the Pacific (Riemer 2002)

The word ‘knock’ originally means making a noise to attract attention, but, in this context, ‘knock’ means to move about, wander and roam. This is a conventionalised expression, but it still retains a referential function and metonymic characteristics.

In short, Dirven (1993) maintains that conceptual distance underlies metaphor and metonymy (see Table 2.1). He particularly focusses on metonymical demarcation points such as pre-metonymy, metonymy and post-metonymy. The metonymic types of modulation, frame variation, linear metonymy and one of the conjunctive metonymies are categorised as non-figurative although they have different lengths of conceptual distance. On the other hand, other conjunctive metonymies, inclusive metonymy, the category of post-metonymy and metaphor are all figurative. I short, it can be said that metaphorical mapping occurs across the two categories and has a large conceptual distance, while metonymic mapping takes place in a single domain, which includes a short conceptual distance.

Conceptual distance is evaluated as the distance between a source and a target. In literal expressions, the source and target overlap. A metonymic source and target are separated, but both are in a single domain. A metaphorical source and target are allocated to different taxonomic domains so that metaphorical expressions have the biggest conceptual distance among literal, metonymic and metaphorical expressions. In fact, metonymy is located in between literalness and metaphor; that is, a variety of metonymic expressions can be identified as metonymy, such as metonymy that is closed to literalness and metonymy that is closed to metaphor. Therefore, there are several types of metonymy that include different levels of figurativity, which reveals the gradation in the conceptual continuum. This shows that metonymy plays an important role in connecting literalness and metaphor. However, it is not fully explained how a source accesses a target in non-linguistic knowledge. Additionally, Dirven (1993) claims that metonymy still needs relevant and salient links of contiguity.

Conceptual distance is one of the indicators of metaphor and metonymy (Dirven 1993), which are divided into three conceptual levels: literal, metonymic and metaphorical. A literal expression has no conceptual distance. Metonymy has conceptual distance, but the distance is less than in a metaphor. Metaphor should have the biggest conceptual distance among the three. This shows that metonymy is located in the middle position and is an important notion for creating the continuum from literal to metaphorical expressions. However, even though Dirven (1993) suggests that conceptual distance is a remarkable feature of motivation for metaphor and metonymy, he does not show us how to identify domains. Nonetheless, he still insists that the relationship between a source and target includes the notion of contiguity and does not show us a framework to understand conceptual distances.

Table 2.1 The literal-figurative continuum (adapted from Dirven 1993)

<table>
<tr><td colspan="7">Thought</td></tr>
<tr><td>Literalness</td><td colspan="6">No-literalness</td></tr>
<tr><td></td><td colspan="2">Pre-metonymic</td><td colspan="2">Metonymy</td><td>Post-metonymy</td><td>Metaphor</td></tr>
<tr><td></td><td>Modulation</td><td>Frame variation</td><td>Linear metonymy</td><td>Conjunctive metonymy</td><td colspan="2">Inclusive metonymy</td></tr>
<tr><td colspan="3">Non-figurative</td><td colspan="4">Figurative</td></tr>
<tr><td colspan="4"></td><td colspan="3">Polisemy</td></tr>
</table>

Radden (2002) also claims that metonymic expressions bridge literal and metaphorical expressions. He shows the gradual transition from literalness, metonymy and metaphor. Consider the adjective *high.* Individuals can express ‘high tower’, ‘high tide’, ‘high temperature’, ‘high prices’ and ‘high quality’, but all these expressions are not at the same stage in the literal/metonymic/metaphorical continuum (Radden 2002). The first one, ‘high tower’, is a literal expression that refers to only vertical information that is deeply related to the original meaning of ‘high’. The second one, ‘high tide’, is also a literal expression, but it is partially metonymic since the vertical meaning in the expression is weaker than in the first. The third one, ‘high temperature’, is fully metonymic since the scale of verticality stands for the degree of temperature. The fourth, ‘high price’, is located in between metonymy and metaphor since it can be understood either as referring to rising prices or a quantity of money. The former reading is metonymic, described as a thing for its representation, while the latter is metaphoric, described as ‘more is up’. The last expression, ‘high quality’, is a metaphor described as ‘good is up’, which refers to a scale of evaluation.

As for intermediate phenomena between literal and metonymic expressions, Radden (2002) introduces partial metonymy, such as in ‘high tide’. This expression is not fully literal since it includes since it includes both vertical meaning and horizontal extension, which includes the UP FOR UP relationship and adds the MORE meaning, resulting in an UP FOR UP AND MORE relationship. Radden also introduces the metonymy-based metaphor for middle expressions between metonymic and metaphorical expressions, such as ‘high prices’. The quality of that expression depends on whether one looks at ‘height’ (of a price) and ‘quantity’ (of money) as belonging to one domain of experience (‘up for more’ or ‘up is more’), in which

the source and target blend into one simultaneous event. The notion of a meaning continuum is based on linguistic phenomena that have fuzzy boundaries and cannot clearly be categorised into defined ideas such as literal, metonymic and metaphorical (Radden 2002).

Table 2.2 Literalness-metonymy-metaphor continuum (adapted from Radden 2002)

Literal	Metonymic			Metaphoric
high tower	high tide	high temperature	high prices	high quality

Despite the fact that the approach to a conceptual continuum of literal-metonymic-metaphorical expressions provides linguistic evidence, it has not explored a theoretical framework of how the continuum measures and what kinds of principles are required in the continuum approach.

2.4.3 Metaphor-Metonymy Interaction Patterns

Continuing the discussion of metaphtonymy, this section review the patterns of conceptual chaining between metaphor and metonymy derived from Ruiz de Mendoza (1997) and Ruiz de Mendoza and Díez (2002). Chaining metaphor and metonymy involves some conceptual item A (source or vehicle) being linked to some item X (target or source in the second link) and X to B (target). There is some patterns where either the A-X link is metaphorical and the X-B link is metonymic or vice versa. According to Ruiz de Mendoza and Díez (2002), metonymy is a kind of subsidiary to metaphor or is part of metaphor since the PART-FOR-WHOLE and WHOLE-FOR-PART metonymic structures produce interactional patterns. This section introduces two basic patterns, (i) metonymic expansion of a metaphoric source and (ii) metonymic expansion of metaphoric target, in order to show the types of interactions between metaphor and metonymy. Consider the following example, which demonstrates the metonymic expansion of a metaphoric source.

(56) He *beat his breast* and said, God, have mercy on me, a sinner (Ruiz de Mendoza and Masegosa 2011)

In this case, the breast-beating action (source) metonymically expands into a scenario in which a person openly show his guilt and sorrow (target), which occurs in the metaphoric source domain. Ruiz de Mendoza and Masegosa (2011) claims that:

> [T]his target domain is metaphorically mapped onto a real situation in which a person makes his sorrow apparent in a ostensive way, perhaps, in order to avoid punishment or any other undesired consequences of his behaviour. Therefore, the metonymy provides a cognitively economical point of access to a complex scenario and functions to develop the point-of-access subdomain to the extent required for the metaphor to be possible. (Ruiz de Mendoza and Masegosa 2011:11)

Goossens (1990) claims that this is a metaphor derived from metonymy while Riemer (2000) claims a different way. He denies that it is metonymy-based metaphor because the metonymic link is absent in the expression and does not involve a process of metaphorisation, however, the example can be accepted as the existence of post-metonymy.

The next example shows metonymic expansion for metaphorical target.

(57) Peter *knitted* his brows and started to grumble (Ruiz de Mendoza 2003)

In this case, a person knitting articles of clothing (source) requires a metaphorical correspondence with a person moving his eyes close together (target), and the outcome of this metaphorical mapping needs to be metonymically developed into a situation in which a person frowns because he is angry. The metonymy operates within the metaphorical target domain. That is, the metaphorical source involves the kind of special feature of facilitating the meaning impact of an aspect of its target, so that the metonymy help to obtain the implications derived from the metaphor. In this way, metaphor and metonymy interact with each other, but they do not lose their original linkage. Therefore, unlike in metaphors, the linkage in metaphor-metonymy interaction survives, and, as a result, metonymy and metaphor can both exist in the operation (Ruiz de Mendoza 2003).

Metaphor-metonymy interaction patterns are useful for understanding intermediate phenomena between metonymy and metaphor because the linkage between source (vehicle)

and target survives in both metonymy and metaphor. But Ruiz de Mendoza's observations regarding the complexity of figurative expression are based on the analysis of individual cases and do not provide a systematic way of understanding (e.g. cognitive models). However, identifying the interaction between metaphor and metonymy depends on researchers and has not yet been established in the literature.

2.4.4 Metonymic Chain

This section reviews the phenomenon of the metonymic chain. A metonymic chain is generally understood as the chained combination of two or more metonymies produced by expanding or reducing domains. A metonymic vehicle accesses a metonymic target where a first metonymic operation constitutes the point of departure for another metonymic shift. This is called a metonymic chain, metonymic complexes or double metonymy in the literature (e.g. Ruiz de Mendoza 2000; Ruiz de Mendoza and Pérez 2001). In order to understand different types of metonymic and metaphorical expressions, reviewing the theory of metonymic chains might be useful. This section simply reviews Ruiz de Mendoza's (2000) perspective on metonymic chains and the underlying cognitive processes that have resulted in an interpretation for the linguistic expressions of (i) double metonymic expansion and (ii) double metonymic reduction.

First is double metonymic expansion. This type of metonymic complex consists of two consecutive operations of domain expansion. Consider the following example.

> (58) Drew S. Days, who *heads* the Justice Department's Civil Rights Division (Ruiz de Mendoza 2003)

In this case, according to Ruiz de Mendoza (2001), there are two steps to understanding 'head'. First, the head that is the uppermost part of the human body stands for a leader that takes charge of an organisation. 'Head' and 'brain' often metonymically refer to a person. The second metonymic shift occurs from the leader to the action. The leader is the agent that performs the action and stands for the whole action of leading.

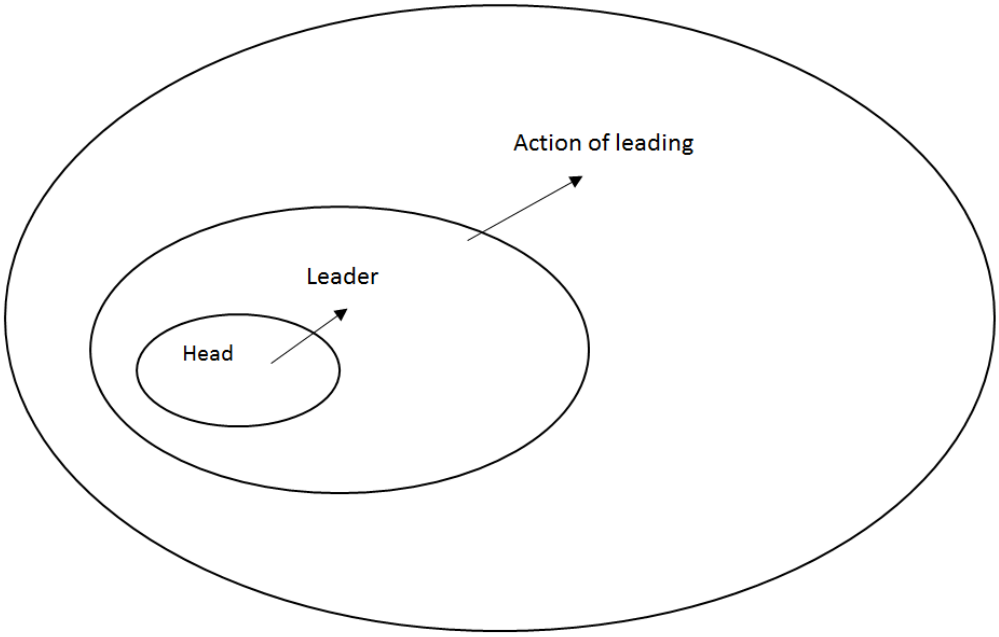


Figure 2.3 Head for Leader for Action of leading (adapted by Ruiz de Mendoza 2000)

The second type is called double metonymic reduction. This type of metonymic interaction involves two consecutive processes of domain highlighting through two consecutive operations of metonymic reduction. Ruiz de Mendoza (2000a) illustrates this metonymic combination with the following expression:

(8) *Wall Street* is in a panic (Ruiz de Mendoza 2003)

The initial domain is Wall Street, referring to the well-known Lower Manhattan street that is home to the New York Stock Exchange. The first metonymic operation, which has given rise to a highly conventionalised metonymy, PLACE FOR INSTITUTION, highlights the subdomain relevant to interpretation—in this case, the financial institution located on Wall Street. In a second domain reduction, the institution, which is the target domain of the first mapping, metonymically stands for the people who work there or are somehow related to it. There are two metonymies where the target of the first mapping becomes the source of the second mapping.

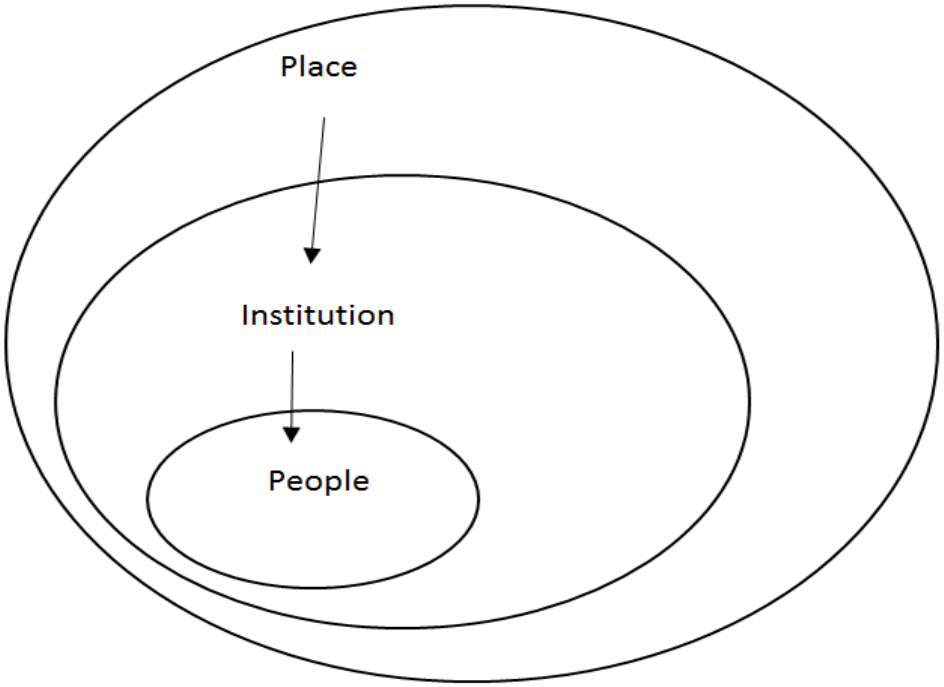


Figure 2.4 Place for institution for people (related to the institution) (adapted by Ruiz de Mendoza 2000)

A metonymic chain is a minimal unit of meaning extension. Individuals often use this method to expand a meaning in conversation. In metonymic chains, certain metonymies seem to link to the operations of other metonymies. In these terms, the chaining of metonymies is a natural consequence of their ubiquity and their multi-level co-occurrence in the same utterance and text (Ruiz de Mendoza 2000). Ruiz de Mendoza (2000) claims that a metonymic chain is a metonymy; for example, the notion of 'head' is in a subdomain-domain relationship with the notion of 'person'. However, other researchers (e.g. Dirven 2000) identify this as either a metaphor or metonymy or both. Therefore, depending on the researchers, the interaction between metaphor and metonymy is still a controversial issue. Chapter 6 discusses the interaction between metaphor and metonymy and, in particular, 'two-step referentiality', which is based on the notion of metonymic chains and chain metaphor and metonymy (see Chapter 6 for more detail).

2.4.5 Group μ's Metaphor as Double Metonymy

Group μ (1981) has introduced a theory of metaphor as double metonymy. This theory is not based on cognitive linguistics and is controversial idea for understanding metaphor, but it has an interesting feature of interaction between metonymy and metaphor. This is different from Ruiz de Mendoza's (2000) metonymic chain. I discuss the interaction between metaphor and metonymy in Chapter 6 by incorporating this notion; therefore, this section simply reviews Group μ's notion of metaphor as double metonymy.

Group μ claims that metaphors consist of the product of two synecdoches. In this idea, there are two different types of synecdoche: decomposition in mode Σ and decomposition in mode Π, which are generalising and particularising synecdoche, respectively. The former, decomposition in mode Σ, is a form where a concept is decomposed into its subclass; for example, if the main concept is a tree, the subclass concept can be birch, poplar or cherry. This can be expressed as tree = birch ∨ poplar ∨cherry ∨. This is based on a genuine-species relationship. On the other hand, the latter type (decomposition in mode Π) is a form where a thing is decomposed into its compositional elements; for example, tree = branch ∧ leaves ∧ root ∧. This is based on A PART-FOR-WHOLE relationship.

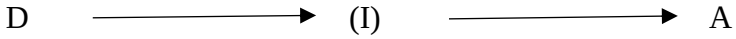
Additionally, Group μ (1981) divides synecdoche into two further types: i) generalising synecdoche (Sg) for up-to-bottom relationships such as 'A GENUS FOR THE SPECIES' and 'A WHOLE FOR THE PART' and ii) particularising synecdoche (Sp) for bottom-to-up relationships such as 'A SPECIES FOR THE GENUS' and 'A PART FOR THE WHOLE'. For more detail, look at the following table.

Table 2.3 Types of Synecdoche (adapted from Group μ 1981)

Types of Synecdoche		
	Decomposition of the Type	
Synecdoche	Σ	Π
Generalising	iron for *blade*	man for *hand*
Particularising	pitch for *invisible*	sail for *ship*

For example, ‘iron for blade’ is a generalising synecdoche in mode Σ because a blade is made from iron, which is a genus-for-species relationship, and a certain concept is decomposed into a subclass of the concept, which is an up-to-bottom relationship. Another example, ‘sail for ship’, is a particularising synecdoche in mode Ⅱ because a sail is an element of a ship, which is a part-for-whole relationship, and a sub-concept of ‘sail’ is decomposed into a main concept, ‘ship’, which is a bottom-to-up relationship.

Next I consider the metaphorical understanding of Group μ’s (1981) idea. For metaphorical composition, metaphor can be shown in the following way:

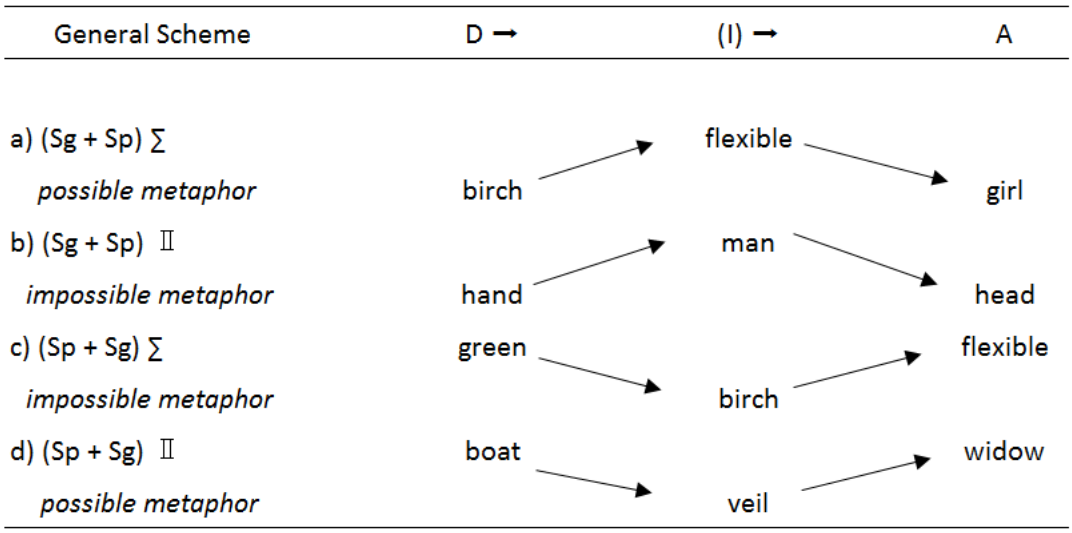


According to Group μ (1981), D is a departure (a starting term), A is the arrival (a resulting term), and (I) is the intermediary term, which is rarely shown in discourse and which is seen as a limit-class or semic intersection (Group μ 1981). In the above, there are two allowed lines, which show the success of synechdoche X →Y, that is, ‘Y linked X’. ‘D and (I)’ and ‘(I) and A’ are both synechdoches in the thoery. As a result, these two synecdoches produce a metaphor. Therefore, this mechanism is called ‘metaphor as double synecdoche’.

What combination can result in a metaphor? Group μ (1981) claims that D and A should be at the same level, and, therefore, the combination should be chosen as Sg and Sp, respectively. As a result, four combinations can be construed. Look at the following table. There are two successful combinations for metaphors among the four combinations: Sg + Sp in mode Σ and Sp + Sg in mode Ⅱ. D and A in both combinations share the same semes. For example, the starting term ‘birch’ can match ‘girl’ through the intermediary term ‘flexible’. There must be an identical seme in the two different lexemes for the starting term ‘boat’ to match ‘widow’ with the intermediary term ‘veil’; there must also be an identical part in the two different totalities. The other two examples are unsuccessful combinations for metaphors: Sg + Sp in mode Ⅱ and Sp + Sg in mode Σ. This is because neither S nor R is decomposable. In this case, (I) can involve a broad range of concepts, and, as a result, the two synecdoches going through the (I) cannot properly create a metaphor. For example, we cannot say ‘head is hand’ and

'flexible is green', generally. This is the brief explanation of metaphor as double synecdoche (Group μ 1981).

Table 2.4 Pattern of combinations of synecdoche and availability of metaphor (adapted from Group μ 1981)



However, some experts (e.g., Eco 1984, among others) have disagreed about the following points in Group μ's opinions: i) definition of synecdoche, ii) way of combining synecdoches and iii) identification of metaphor and double synecdoche. For the first point, we should consider two problems: Do we really need to divide the two classes Σ and Ⅱ? And how do we divide metonymy from synecdoche? In considering the former issue, many scholars have claimed that the distinction between Σ (a genus-species relationship) and Ⅱ (a part-for-whole relationship) is not very important because the genus-species relationship can belong to a group of part-whole relationships. As for the latter case, some scholars[2] claim that synecdoche is an

[2] Seto (1999) completely distinguishes metonymy from synecdoche. He insists that a genus-species relationship (kind-of relationship) is a synecdoche, while a part-whole relationship (part-of relationship) is a metonymy. This is because historically a genus-species relationship has been called a taxonomy in the classification approach and a hyponymy in semantics, while a part-for-the-whole relationship has been called a partonomy in the classification approach and a meronomy in semantics. In addition, each relationship has different features: A part-of relationship is based on concrete entities (E-relation) while a kind-of relationship is based on conceptual categories (C-relation). However, this kind of sub-classification involves some ambiguity of the border between E-relations and C-relations. Consider the following example: 'She likes Shakespeare'. This example is derived from the producer-for-product relationship. However, we cannot exactly say that Shakespeare is a concrete or abstract entity. 'Shakespeare' refers to a person, but he is rather

independent expression from metonymy in the way that a genus-species relationship is different from a PART-FOR-WHOLE relationship. However, similar to the former case, a genus-species relationship is not an independent relationship, and it can belong to a part-for-whole relationship. Therefore, in cognitive linguistics, most scholars consider synecdoche to be one type of metonymy (see Lakoff and Johnson 1980; Evens and Green 2006 etc.). Following these cognitive linguistics scholars, this thesis also considers synecdoche to be one type of metonymy.

The second issue of how to assemble two synecdoches has not been defined clearly. There are some types of synecdoches that can produce a metaphor, but some metaphors do not come from synecdoches. For example, in structural metaphors, FEELINGS ARE LIQUIDS: FEELINGS include love, anger, hatred, etc. and LIQUIDS include water, tea, petrol, beer, etc. Consider the examples 'swallow her anger' and 'ocean of happiness', which are completely metaphorical expressions, but they cannot succeed in being made into metaphors as double metonymy because we cannot find the intermediary terms (I) in those expressions. In other words, not all metaphors consist of two synecdoches.

Another issue in the theory of metaphor as double metonymy is that the concept can explain both literal and metaphorical expressions in an 'X is Y' sentence. For example:

(59) Man is a thinking reed

(60) Man is an animal

We can find the intermediary term (I) in both sentences. In the first sentence, 'a thinking reed' is a starting term and 'man' is a resulting term. 'Weakness' is a potential intermediary term. In the second sentence, 'an animal' is a starting term and 'man' is a resulting term. 'A living thing' is a potential intermediary term. Thus, it seems that both sentences can be explained by an IS-relation.

The final issue is related to the traditional substitution view of metaphor because the two theories are very similar. The substitution theory claims that a metaphorical expression is a

a historical character for us. Therefore, it can be possible to divide metonymy from synecdoche, but this thesis consider synecdoche as one type of metonymy.

substitute for a literal expression that has the same meaning; that is, in the substation theory, metaphorical expressions play the role of decorating a sentence.

(61) The man is a wolf

(62) The man is dangerous

Look at the above sentences. 'A wolf' is substituted for the meaning of 'dangerous'. Therefore, this substitution simply changes one word to another that holds the same meaning. This phenomenon cannot explain the figurative effect in this sentence. The idea of metaphor as double metonymy is one type of substitution view, changing from a starting term to a resulting term through an intermediary term. That is, metonymy as double metonymy has also been unappropriated in the literature. The received view of figurative expressions claims that they are based on our experiences; therefore, metaphorical expressions are not just decorations of sentences, but they deeply relate to our minds.

For the reasons discussed above, Group μ's (1981) idea of synecdoches (metonymies) has not been accepted by linguists. However, the notion of metaphor as double metonymy is quite important in the literature. Because I have supported the view of a literal-figurative continuum in the previous chapters, metaphor and metonymy are not independent phenomena but have some conceptual relationship. In these terms, the second issue is understandable. Since literal expressions and figurative expressions have some continuity, it is possible for them to be understood using the same method, IS-relation. However, there are possibly other type of metaphors but according to Group μ's idea, when an intermediary term is missing linguistically, people cannot compose a metaphor from two synecdoches; that is, different types of metaphors cannot be a metaphor as double metonymy. That is, it seems that if individuals is missing a linking word, they cannot compose metaphors. Since the thesis deeply investigate metonymic operation in a concept and its relation with metaphorical operation, in terms of this, this notion is somehow compatible with the direction of this thesis (see Chapter 3, 4 and 5). In other words, this thesis is very receptive to the idea of a metaphor as double metonymy, and it is worth analysing the potential of metonymies for metaphorical expressions.

Although the idea of metaphor as double metonymy is controversial, the concept of producing metaphor from metonymy, or the interaction between metaphor and metonymy, is still alive in the current literature. Therefore, metonymy as double metonymy (synecdoche) is

worth analysing from a new perspective to understand the differences and similarities between metaphor and metonymy. I consider and analyse this in Chapter 5.

2.5 Summary

This chapter has reviewed important received views of metonymy and has discussed a number of problematic properties found in those perspectives since the cognitive mechanisms that this thesis proposes for metonymy are used in an extended form for metaphor. Recently, metonymy has also been productively re-examined and discussed in a number of collections of papers. Inspired by these previous studies, this thesis focusses on metonymic expressions that potentially bridge literalness and metaphor.

In the received view of metonymy, the source (vehicle)-target link survives in metonymic operation because a source stands for a contiguous target within a single domain; metaphorical operation occurs within two different taxonomic domains by virtue of similarity between source and target, but the source-target link is completely absent. As for the identification of various levels of contiguity or referentiality, the conceptual relationships between concrete metonymical patterns and the correspondence between various domains of contiguity that have already been suggested are sometimes avoided in other studies. It might be important to know whether a linkage includes similarity or contiguity (or referentiality), but, as shown above, we cannot clearly say a certain expression is metonymic because of contiguity and vice versa because the notions of similarity and contiguity are difficult to define clearly; metaphor sometimes involves contiguity (or referentiality), and metonymy also involves a sort of similarity. Based on this, rather than focussing on differentiating between metaphor and metonymy on the basis of their interaction with conceptual domains, it is important to examine the ways in which metonymy and metaphor operate within a conceptual domain or across conceptual domains (Barnden 2010).

In addition, some scholars (e.g., Barnden 2010; Dirven 1993; Ruiz de Mendoza 2003; Radden 2002; Warren 1999) claim that there is some (conceptual/meaning) continuum between metaphor and metonymy, or even literalness-metonymicity-metaphoricity, in light of conceptual distance between a source (vehicle) and target. If so, the domain-based distinction between metaphor and metonymy fails to account for the continuum because there is no clear-

cut distinction between them. In some cases, a metaphor involves a metonymic link while metonymy uses a metaphorical link (e.g. 'The creampuff didn't even show up') because these functions (similarity, contiguity and referentiality) are more or less flexible in their usage.

Scholars show that metonymic expressions can be widely spread among literal and metaphorical expressions, and some metonymic expressions are close to literal or metaphorical expressions. However, they only show analysis of individual cases of linguistic examples and do not show an exact theoretical framework or cognitive models of how a source (vehicle) accesses a target in conceptual knowledge instead of in a domain-based approach. In order to complement these studies, this study adds a cognitive model to show the conceptual continuum, including literal, metonymic and metaphorical expressions, prototypical expressions and non-prototypical figurative expressions. As a result, the continuum between metaphor and metonymy can be systematically examined in different uses by providing an alternative model that accounts for the possibility of the linkage between source (vehicle) and target (see Chapter 3 for more detail).

In the analysis, I focus on the meaning construction of establishing a linkage between source and target and carry out a systematic examination by using an alternative theory. I hypothesise that focussing on the continuum between metaphor and metonymy (e.g., the conceptual distance between a vehicle and target) might determine the spectrum of figurativity because all figurative (metonymic) vehicles more or less extend their meanings to more peripheral ones. In light of this, the observed conceptual distance between a linguistic vehicle and a target in its encyclopaedic knowledge is a reasonable symptom that can be applied to all examples, unlike previous accounts that can only apply to prototypical metonymies. The next chapter introduces an alternative theory, the theory of Lexical Concept and Cognitive Models.

Chapter 3

Lexical Concept and Cognitive Model Framework

3.1 Introduction

The literature review has shown that the metonymic function of contiguity is not the fundamental, core feature of metonymy. The function cannot apply to all types of metonymic expressions because these expressions exist as several types. The boundary between source (entity) and target is also still ambiguous since domains often interact and overlap; because of this, we cannot clearly separate literal, metonymic and metaphorical expressions based on domain approaches. In addition, previous studies have mainly focussed on deep-level cognition and not surface-level knowledge such as linguistic forms. This chapter presents a new perspective for clarifying figurative expressions, focussing on the connection between language and conception. To show that connection, this study uses the LCCM theory (e.g., Evans 2006b, 2009a, 2010), examines meaning construction in a figurative sentence and considers how a figurative vehicle (which produces figurative expressions and plays a role in accessing a figurative target) consists of other lexical items and finds its conceptual content and how sentence-level meaning arises in the understanding process.

I start by providing an overview of the LCCM mechanism, including the connections between word and meaning, linguistic content and conceptual content, and a lexical concept and non-linguistic knowledge (see Section 3.3 for more detail). The next section explains the figurative language understanding of how the LCCM framework addresses the difference between literal and figurative expressions and also details the difference between metaphorical and metonymic expressions. Section 3.4 discusses this further. The final section explores the application of the LCCM theory in my research and summarises this chapter.

3.2 Background of LCCM Theory

The perspective of the LCCM theory is mainly inherited from CMT (Lakoff & Johnson 1980) and other cognitive linguistic theories (Fauconnier 1997, Fauconnier & Turner 2002) and is also inspired by cognitive grammar (e.g., Croft 2001; Goldberg 1995; Langacker 1987) and

cognitive science (e.g., Barsalou 1999). The LCCM theory details how language is deployed and the process of conceptual integration. In more detail, the theory interfaces with the linguistic processes of semantic composition (surface-level cognition) and non-linguistic knowledge structures (background processes); in other words, the theory is associated with linguistic and conceptual systems in a single mechanism (the LCCM framework).

The LCCM theory is one of access semantics, in which language is allowed to develop its semantic units and provides access to encyclopaedic knowledge. That is, access semantics attempts to combine linguistic form and meaning in line. In other words, it admits the lexicon–grammar continuum, and, as a result, it shows that semantics and pragmatics cannot be sharply distinguished (e.g., Croft 2001; Goldberg 1995; Langacker 1987). For example, as seen in the previous chapter, Langacker (1987, 1993, 2008) considers figurative expressions in cognitive grammar on a semantic basis. He claims that conceptual content and construals are necessary for meaning construction. Lexical representations provide access to encyclopaedic knowledge via a mental path. The form-meaning pairs build simple and even complex lexical units; words should be understood with a vast body of encyclopaedic knowledge. Semantic structures are conceptualisations exploited for linguistic purposes, which directly access the conceptual structure. Therefore, the access point in non-linguistic knowledge, or the meaning of the expression, is deeply related to the abstract (functional) aspect and linguistic form.

Croft (1993, 2001) claims that meaning is encyclopaedic, or, more precisely, that individuals can understand a meaning by accessing a certain point in the knowledge network. In his model (radical construction grammar), unlike in the traditional view of cognitive grammar, constructions are the basic units of linguistic structure, and individual word meanings (parts of the sentence) can be understood from the construction (whole sentence). That is, once a sentence-level meaning has been established, each word meaning should then be understood. As a result, rather than understanding units of context-independent word meanings, word meaning is determined by the encyclopaedic knowledge to which words provide access as guided by context.

Goldberg (1995) maintains an opinion from the perspective of construction grammar that meaning belongs to the lexical concept as well as to the construction itself. For example, she shows that a ditransitive construction carries a distinct semantic representation. Look at the examples below:

(63) John baked Mary a cake (Goldberg 1995)

(64) John refused Mary money (Goldberg 1995)

In order to interpret the above examples, the ditransitive construction can create several meanings from the different constructions, such as 'X causes Y to receive Z', 'X intends to cause Y to receive Z' and 'X causes Y not to receive Z'. Therefore, this shows that a lexical concept can set up the semantic and pragmatic knowledge bundle associated with the sentence-level vehicle. This means that the form of a sentence (grammar) also provides meaning.

To summarise, because the connection between semantic structure and conceptual structure tends not to be considered in the literature, access semantics attempts to complement that missing link (Croft 2001; Evans 2009a; Goldberg 1995; Langacker 1987). In access semantics, words are considered contextual expressions. Meaning should be considered with linguistic form as well as non-linguistic context. Among access semantics views, the LCCM theory strongly highlights the distinction between semantic and conceptual structures, which has not been explained well in the literature but is the most important feature accounting for the role of language in meaning construction. In addition, exploring how to construct sentence-level meaning is directly related to understanding figurative expressions. The following sections describe more details of the LCCM framework.

3.3 Overview of LCCM Theory

The LCCM framework (Evans 2009a) is a protean approach to word meaning. Lexical concepts are part of individual mental grammar because they are associated with linguistic forms. Lexical concepts provide access sites that are particular points in encyclopaedic knowledge that include vast bodies of conceptual structures. Cognitive models relate to a frame (Barsalous 1999), semantic frame (e.g., Fillmore 1982) and base (Langacker 1987), but cognitive models here are used to understand the way lexical concepts contribute to meaning construction (Evans e.g., 2009b). A cognitive model is a coherent, in large part non-linguistic knowledge structure. That is, it is a richly specified conceptual entity that represents an interface between richly specified conceptual knowledge and nodes of access at particular points in the cognitive model provided by specific lexical concepts.

In language use, lexical concepts access and activate cognitive models; in other words, lexical concepts simulate cognitive model structures. Therefore, the role of language is to provide connecting knowledge contained in the conceptual system. The conceptual system is made from perceptual and subjective states derived from sensory-motor perception, proprioception and introspection. This information is continuously updated in cognitive models. This is derived from the theory of Perceptual Symbol Systems (see Barsalous 1999), which successfully complements previous accounts of cognitive grammar (Croft 2001; Goldberg 1995; Langacker 1987) and provides a unified account of cognitive semantics and cognitive grammar. The LCCM theory provides a valuable and insightful new approach to meaning variation in language comprehension and production and to figurative language understanding.

I show how to build up a lexical representation from both systems, the linguistic and conceptual systems shown in Figure 3.1. A lexical concept creates a symbolic unit by assembling with a linguistic form. A symbolic unit has semantic structure and phonological content; a symbolic unit is also called a 'bipolar symbolic assembly' (Evans 2009a). The conceptual system in general refers to the cognitive model, which is a coherent, complicated and large body of non-linguistic knowledge structure and also the place to which lexical concepts provide access. Lexical representation consists of both the conceptual system and linguistic system and is the foundation for meaning construction. The following figure demonstrates the construction of the lexical representation.

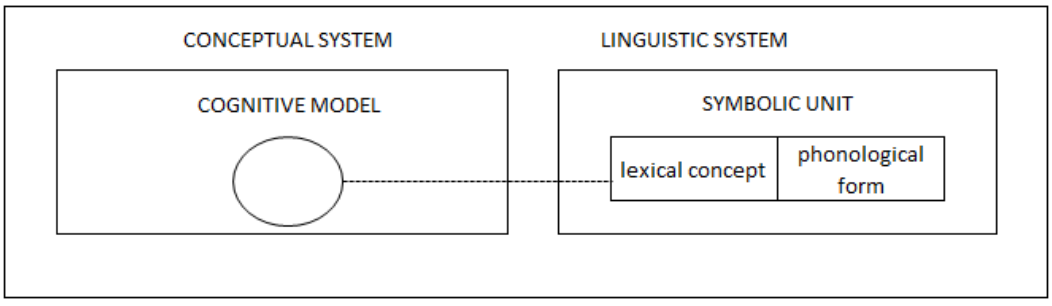


Figure 3.1 Lexical representation in the LCCM theory (adapted from Evans 2009a)

3.3.1 Word Meaning

This section considers how word meaning is singled out in the LCCM framework. Historically, the definition of 'word meaning' differs among linguistic fields. For example, it is well known that the pragmatic perspective describes word meanings as based on the context-dependent, while the semantic perspective describes them as based on the context-independent. Both of these approaches only focus on a single aspect of the word meaning. Cognitive linguists (e.g., Brugman and Lakoff 1988; Lakoff 1987; Carston 2002; Herskovits 1986, Pustejovsky 1995) stress the background cognition of word meaning rather than language form.

In LCCM work, words have a number of conventional senses, which are mentally stored in semantic units. A lexical item is established by the unit of lexical entries (e.g., a morphological specification, a syntactic specification and semantic specifications) and produces not only literal meaning but also more abstract and flexible meanings such as novel meanings (Evans 2006b). Evans describes that 'Meaning is a property of situated usage-events, rather than that of words. That is, meaning is not a function of language per se, but arises from language use' (Evans 2006b:491). For example, consider the following examples in terms of variations in word meaning:

(65) A fast car (Evans 2009b)

(66) A fast learner (Evans 2009b)

(67) A fast decision (Evans 2009b)

At first glance, examples (65), (66) and (67) seemingly suggest 'quickness' or 'rapidness'. However, we ultimately find that these examples have slightly different meanings. Example (65), 'a fast car', means 'a car that moves quickly', which expresses 'rapid locomotion'. The word 'fast' in example (66) means 'an individual who does something in a short time', which means that 'a learner proceeds quickly'. Finally, example (67), 'a fast decision', means that 'an individual achieves something quickly', which refers to 'a short duration until the decision'. As these three examples show, each use of 'fast' has a slightly different meaning. Examples (66) and (67) in particular extend their meanings of 'fast' from 'moving quickly or rapidness'. Therefore, each meaning of 'fast' has a slightly different semantic value determined by the context.

Generally, a word has more than one meaning, and people choose an appropriate one from the potential meanings in the process of understanding. Even though one might think that the choosing process is simple and automatic, it is a genuinely complicated process based on the cognitive understanding process that interprets accurate word meanings. Word meaning derives from our embodied cognition, which influences our mind and conceptual representation. The conceptual system that includes bodily, neurological and subjective states is stocked in the mind and used for the cognitive operations of language understanding, such as the choosing, reasoning and categorisation processes. Therefore, it can be said that our cognition is also indirectly related to the interpretational operation of word meaning (Evans 2009a). I further explain this understanding process in later sections.

On a related note, encyclopaedic knowledge, which includes larger and more complex knowledge structures, influences the human conceptual system. That knowledge should also be relevant to interpreting word meaning; in particular, this non-linguistic knowledge is accessed by words. People stock several potential word meanings in their knowledge and single out a proper meaning by accessing that knowledge. Word meaning is used as a connection between actual language use and the encyclopaedic knowledge; that is, a word has a variety of meanings that can be constrained by the process of accessing them from the lexical concept and non-linguistic knowledge (Evans 2009a).

3.3.2 LCCM Framework

This section reviews the LCCM operation in terms of how this mechanism works in literal and figurative expressions. The operation starts from the 'lexical concept selection', which is the operation of choosing an appropriate lexical concept. The next operation is called *fusion*, which occurs when a lexical concept transfers conceptual content from linguistic content.

The operation of fusion has two processes: i) *lexical concept integration*, which is the foundation for the activation of conceptual content, and ii) *interpretation*, where the lexical conceptual unit undergoes *interpretation* and then matches with a cognitive model. If the matching fails, *a clash* operation occurs and requires *a clash resolution site* to match further.

3.3.2.1 Lexical Concept Selection

A lexical concept in LCCM theory is a unit of semantic structure conventionally associated with a linguistic form. Each lexical concept has a unique lexical profile, which defines the property of the lexical concept. A lexical profile relates to the range of i) semantic arguments with which a given lexical concept can collocate, which is related to semantic selectional tendencies, and ii) grammatical constructions (linguistic content), which are the formal patterns in which a given lexical concept occurs and which relate to formal or grammatical selectional tendencies. Evans (2009a) claims that the distinction in content evoked by language is related to the linguistic system (and lexical concepts) and the conceptual system (and cognitive models) (see Figure 3.1). Evans calls the two distinct types of content linguistic content and conceptual content. Conceptual content relates to the rich content evoked by open-class lexical concepts, which are also encoded with linguistic content, while closed-class lexical concepts are associated with linguistic content (Evans 2009a).

Lexical concept selection is the operation that singles out a particular lexical concept related to linguistic or extra-linguistic contexts from potential lexical concepts. A linguistic system includes symbolic units, which consist of phonological forms and lexical concepts. A phonological vehicle is potentially associated with a large number of distinct lexical concepts (potential lexical concepts), but people need to single out an appropriate lexical concept in meaning construction in order to interpret expressions. After the operation of lexical concept selection, a lexical concept (open-class) identifies the best-fit lexical concept related to a given linguistic form. Then, the lexical concept integrates with other lexical concepts in a given context, which is the next compositional process: '*fusion'*.

Open lexical concepts undergo the operation of lexical concept selection. Lexical concepts are mainly divided into two types: open- and closed-class concepts. Consider the following example:

(68) A waiter served the customers (Evans 2009a)

In example (68), the words 'waiter', 'serve' and 'customer' belong to the open class, while 'a', 'the' '-ed', and '–s' are categorised as closed-class vehicles. Both open- and closed-class vehicles are encoded with linguistics content, but only open-class vehicles are encoded with conceptual content, which integrates with other open lexical concepts. The LCCM framework

is divided into more detailed subclasses of lexical concepts, such as the internally open lexical concept, which is associated with a vehicle that is not fully lexically specified. In these terms, open lexical concepts can be integrated with other less abstract concepts. An internally closed lexical concept is opposed to an internally open lexical concept. The vehicle is lexically specified and therefore has no internal specification of the integration of a further lexical concept. An externally open lexical concept has a lexical profile associated with it. Therefore, this lexical concept can extend to other lexical concepts. An internally simple lexical concept has no part-whole structure and hence cannot be analysed in terms of more than one lexical concept (Evans 2009a).

3.3.2.1.1 Types of Lexical Concept Selection

The operation of lexical concept selection is divided into two types: 'broad selection' and 'narrow selection'. Broad selection has single and multiple selections including two different types: single-instance and multiple-instance.

3.3.2.2.2 Broad Selection

Single selection is one type of broad selection, which selects a single lexical concept from potential lexical concepts in order to build a conception. For example:

(69) The kitten is *in* the box (Evans 2009a)

The preposition 'in' is stored in many potential lexical concepts in our semantic memory. Among them, a proper single lexical concept is singled out to fit the context. In this case, the lexical concept of [ENCLOSURE] should be singled out from the potential lexical concepts. As such, 'the language user will select a single lexical concept in order to build a conception. This is the canonical situation, and is referred to as single selection' (Evans 2009a:235).

The following examples constitute a further illustration of single selection, which is choosing one lexical concept per sentence, out of the many available. Consider the following examples:

(65) a *fast* car [RAPID LOCOMOTION]

(66) a *fast* learner [RAPID PERFORMANCE OF ACTIVITY]

(67) a *fast* decision [REQUIRES LITTLE TIME FOR COMPLETION]

People store potential lexical concepts of 'fast' in their memory. From among them, people select one lexical concept among several lexical concepts.

Multiple selection incudes other two subclasses: i) single-instance multiple selection and ii) multiple-instance multiple selection. The following example of single-instance multiple selection as two or more lexical concepts are simultaneously chosen to construct one unified meaning.

(70) We need a *fast* garage for our car, as we leave the day after tomorrow (Evans 2010)

In this example, 'fast' can include two lexical concepts: [RAPID PERFORMANCE OF ACTIVITY] and [REQUIRE LITTLE TIME FOR COMPLETION]. The first means 'We need a garage that will work 'fast' for the day after tomorrow'. The second expresses that 'We need a garage to repair the car 'fast''. A garage is required where the mechanics can both perform the relevant repairs quickly and, in doing so, take little time for the completion of repairs, given that the car will be required the day after tomorrow. This sentence can hold both lexical concepts for the vehicle 'fast'. In other words, there is a single instance of a vehicle ('fast' in example [70]) that requires the selection of multiple lexical concepts.

The next example is a multiple-instance multiple selection.

(71) On the day my old dad *expired*, so did my driving licence (Evans 2009a)

In this utterance, a single word is used in different parts of the sentence, but the word is omitted in the second occurrence and the meaning is still understandable. This context relays both the meaning of [DEATH] and [LOST THE RIGHT OF DRIVING] by using 'expired'. Each instance is associated with a distinct reading, giving rise to a humorous effect. Indeed, the example in (71) where the two clauses are related by virtue of employing (or implying) the same verb is an instance of the figure of speech known as zeugma, which is often found in poems and literature. In this sense, this sentence is a multiple-instance multiple selection. In both examples (70) and

(71), two lexical concepts are used for a single word, but, in example (71), each instance connects to a distinct reading.

3.3.2.2.3 Narrow Selection

Differing from broad selection, which concerns a number of lexical concepts, narrow selection occurs when a lexical concept is selected within a single lexical concept. As shown above, the [ENCLOSURE] lexical concept is associated with the prepositional vehicle 'in'. This lexical concept, I have argued, encodes (at least) two distinct parameters: 'enclosure' and 'location with surety'. Which parameter is selected is a function of context. Consider the following examples:

(72) The toy is in the box [parameter: (full) ENCLOSURE] (Evans 2009a)

(73) The bulb is in the socket [parameter: LOCATION WITH SURETY (PARTIAL ENCLOSURE)] (Evans 2009a)

(74) The flower is in the vase [parameter: LOCATION WITH SURETY (PARTIAL ENCLOSURE)] (Evans 2009a)

(75) The umbrella is in his hand [parameter: LOCATION WITH SURETY (PARTIAL ENCLOSURE)] (Evans 2009a)

Contexts involving full enclosure, such as that in (72), select the 'enclosure' parameter, while contexts involving only partial enclosure, as shown in example (73), select the 'location with surety' parameter. Once a lexical concept is specified, it still has different subclasses. A lexical concept comprises a bundle of different types of knowledge. Parameter is a subclass of lexical concept that includes smaller types of knowledge. Knowledge uses fine nuance to express complex experiences. This nuance is sometimes compressed in encyclopaedic knowledge and sometimes distinguished as several parts to develop general knowledge. For example, the preposition 'in' has at least two distinct parameters: [ENCLOSURE] and [LOCATION WITH SURETY]. Which parameter is selected depends on context. In this case, the parameter is foregrounded by the activation of the specific vehicle.

3.3.2.2 Summary of Lexical Concept Selection

Literal expressions are applied with single selection, in which one lexical concept is singled out from potential lexical concepts. Literal expressions are clearly associated with one lexical concept and its lexical profile. The selection is very clear, and there is no need to doubt that other lexical concepts might associate with the linguistic content. On the other hand, narrow selection occurs in cases where one lexical concept is selected within a single lexical concept. A lexical concept sometimes includes subclasses, which are several small ranges of lexical concepts. When the parameter is activated by a vehicle, the meaning is foregrounded.

3.3.3 Fusion

Fusion is the second operation of lexical concept selection; it is an essential process of semantic composition in which linguistic content is transferred into conceptual content. The previous sections have already introduced lexical concepts and fusion, but this section considers in more detail the semantic compositionality of word meaning. Fusion consists of two processes: i) *lexical concept integration*, which is the operation of unpacking linguistic content and activating conceptual content, and ii) *interpretation*, the next operation, in which the lexical conceptual unit is interpreted. The outcome of *interpretation*, or some sort of internal representational object, is called informational characterisation.

3.3.3.1 Lexical Concept Integration: Fusion 1

The first fusion operation is *lexical concept integration*, which can be divided into two types: internal lexical concept *integration* and external lexical concept *integration*. The former *integration* applies to internally open lexical concepts and is constrained by a lexical concept's internal selectional tendencies. Evans claims that:

> Each conventional sense in lexical concepts has associated with it selectional restrictions. When the lexical concept is internally open, it can be integrated with other less abstract lexical concepts paired with vehicles that do have phonetically explicit phonetic content. This is called internal selectional tendencies. (Evans 2010:20, 135)

The latter *integration* applies to externally lexical concepts and is subject to external selectional tendencies. For example, a lexical concept is not integrated with all other lexical concepts since they tend to have the same or similar shared schematic features at the level of linguistic content. Consider the following examples:

(76) [FRANCE] + [RELATION EVOLVING THROUGH TIME]

(77) [FRANCE] + [THING]

In (76), it is difficult for the combination of [FRANCE] and [RELATION EVOLVING THROUGH TIME] to undergo an *integration* because there is no schematic coherence between them. These operations are constrained by the principle of linguistic coherence, which means that an internally open lexical concept may only be integrated with a lexical concept with which it shares schematic coherence in terms of linguistic content (Evans 2009a). The operations are also constrained by the principle of schematic coherence, which states that 'the content associated with entities, participants, and the relations holding between them must exhibit coherence in fusion operations' (Evans 2009a: 245). By contrast, in (78), the relationship between [FRANCE] and [THING] can undergo an *integration* because they can have the same schematic coherence at the level of linguistic content. Based on this, consider the following example:

(78) a. The 1940 armistice gave Germany France (Evans 2009a)

b. NP1 VERB (FINITE) NP2 NP3

C. [THING X CAUSES THING Y TO RECEIVE THING Z]

In this case, first of all, [THING X] should be integrated with *the* DETERMINER [SPECIFICATION], *1940* MODIFIER [ATTRIBUTE] and *armistice* NOUN [THING]; then, [THING Y] and [THING X] undergo *integration*. After that, the three become an internally open lexical concept, which is [A SPECIFIED THING]. After internal lexical concept *integration* is finished, their appropriate lexical concept comes into sharp focus, and the external lexical concept *integration* begins. The procedure of lexical concept *integration* proceeds from simple lexical concepts to more complex lexical concepts. This is governed by the principle of ordered integration in internally open lexical concepts (Evans 2009a).

External lexical concept *integration* involves specifying lexical concepts by their external selectional tendencies and passing them on to the next operation of *interpretation*. In other words, it involves the *integration* of an internally closed lexical concept and an internally open lexical concept that has become closed due to internal lexical concept *integration*. Consider the following example:

(79) a. Do you know which country its inhabitants refer to as the hexagon?

b. France! (Evans 2009a)

This lexical concept of [FRANCE] is an exclamation and an externally closed lexical concept. Some lexical concepts do not have a lexical profile associated with them. This is a feature of lexical concepts that constitute semantically well-formed utterances in their own right. Evans (2009a) refers to such lexical concepts as being externally closed. Lexical concepts of this kind include greetings such as 'Hello!', 'How do you do?' and 'Hi!' and exclamatives such as 'Shit!' (Evans 2009a). In example (79), the *integration* is not operated because the lexical concept of [FRANCE] is the result of an interpretation.

The next example of [FRANCE] is slightly different:

(80) France is a geographical region (Evans 2009a)

From the perspective of the lexical concept [FRANCE], here the lexical concept [FRANCE] undergoes external lexical concept *integration*. In example (80), [FRANCE] is integrated with the lexical concept [UNIQUE SPECIFIED THING], which is associated with the vehicle 'DEFINITE-NP', rather than with the entire [ATTRIBUTION OF A QUALITY TO AN ENTITY] lexical concept associated with the vehicle 'DEFINITE-NP, be FINITE INDEFINITE-NP'. It is by virtue of the integration of [FRANCE] with the [SPECIFIED THING] lexical concept, which forms part of the 'predicate nominative' lexical concept, that [FRANCE] acquires its status as the Theme or Subject of a predicating expression. In other word, just as example (78-c), lexical concepts [THING X], [THING Y], and [THING Z] encodes differential linguistic content, so each [THING] slot is different. Since [FRANCE] occupies the NP slot it does in (80), it achieves a distinct semantic value vis-a-vis the semantic value achieved by the lexical concept [GEOGRAPHICAL REGION] in the same utterance (Evans 2009a: 249).

By repeating the operation of *integration*, lexical concepts become larger units and then form other classes of lexical concepts. I discuss the operation of the *integration* process below.

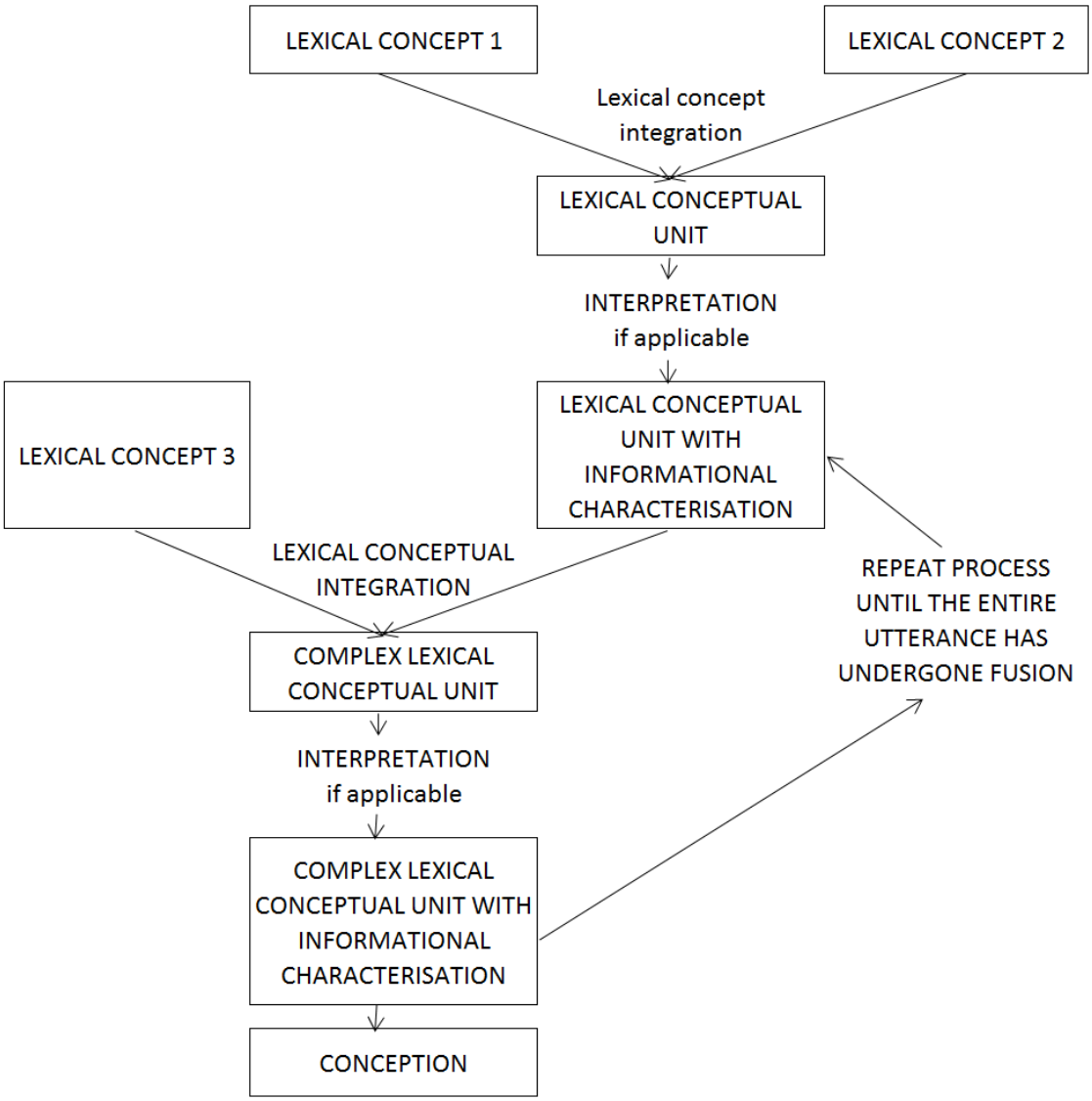


Figure 3.2 Stages in the process of fusion (adapted from Evans 2009a)

In short, the first operation of lexical concept *integration* in fusion is an integration process of semantic composition for establishing semantic construction. The integration of lexical concepts produces a composite unit called a lexical conceptual unit. The lexical conceptual unit then undergoes *interpretation* and becomes a situated reading, which is called an informational characterisation. At this time, the lexical conceptual unit is integrated with other lexical concepts or lexical conceptual units based on the context, which undergoes the next step:

interpretation. Through this operation, each lexical concept receives a semantic value; in other words, this process unpacks linguistic content and transfers it into conceptual content.

3.3.3.2 Interpretation: Fusion 2

The third operation of the LCCM framework is the *interpretation* of fusion. In this operation, each open lexical concept in a given sentence undergoes matching within each cognitive model, and, as a result, the process gives rise to informational characterisations. Once each informational characterisation arises, it matches with other lexical concepts that facilitate access to its unique cognitive model until each open-class lexical concept in an utterance has undergone interpretation. In this process, simple lexical concepts undergo matches with other lexical concepts in a given sentence in order of priority from simple to complex. Once all the lexical conceptual units in an utterance have become informational characterisations, the sentence receives its utterance-level informational characterisation: a conception, or, in other words, a meaning. The conception then accesses encyclopaedic knowledge (cognitive models), which involves activation in cognitive models. This is called primary activation, in which the output of lexical concept *integration* (a vehicle) generally first facilitates access to primary cognitive models and then accesses secondary cognitive models when the operation of '*clash*' occurs in primary cognitive models, as constrained by the principle of guided matching (P4). Additionally, the interpretation is guided by the outcome of lexical concept *integration* and by inferential processes relating to extra-linguistic context.

Now I reflect on how full sentences are analysed from the LCCM perspective. Consider the following examples in terms of the fusion operation:

(81) FRANCE has a beautiful landscape (Evans 2010)

(82) FRANCE rejected the EU constitution (Evans 2010)

The word [FRANCE] in examples (81) and (82) has different meanings: GEOGRAPHICAL AREA and ELECTORATE, respectively. In example (81), the lexical concepts BEAUTIFUL and LANDSCAPE integrate and construct an informational characterisation, which is a predicate nominative lexical concept. At this moment, the process is guided by the principle of guided matching. After that, the predicate nominative lexical concept, BEAUTIFUL LANDSCAPE, accesses

the cognitive model of [FRANCE] and matches with GEOGRAPHICAL AREA in a primary cognitive model. The theme of the sentence is determined by virtue of the lexical concepts undergoing *integration*, which is based on the principle of schematic salience in matching, which states that matching across cognitive model profiles achieves grater schematic salience (Evans 2009a). As such, a selective activation occurs in the cognitive model of [FRANCE], and the vehicle finally achieves primary activation.

On the other hand, in example (82), the informational characterisation of [FRANCE] is associated with the expression REJECTED THE EU CONSTITUTION and matches with the secondary cognitive model of ELECTORATE in the cognitive model of [FRANCE]. Before this matching occurs, a match fails in the primary cognitive models, and the informational characterisation then searches for a further cognitive level. This unsuccessful matching is called *clash*, which is constrained by the principle of ordered search, in which an informational characterisation accesses primary cognitive models first and then secondary cognitive models in order. In addition, example (82) is a metonymic expression because 'France' refers to the electorate. So why can individuals find an appropriate lexical concept? This is possible because there is an arrangement in the understanding process.

When individuals understand conversation, they are trying to interpret linguistic information and invisible information, such as the utterance topic is a discourse foundation, the preceding discourse, the general nature of the conception and so forth. The addressee's assumption and the addresser's communicative intention are also important functions for *interpretation*. This information cannot be seen visually but is deeply related to the operation of lexical concept selection and to vehicles accessing targets in cognitive models. When individuals process languages, they also consider non-linguistic information. This is called *co-selection* (Evans and Zinken in preparation). Fauconnier (1997) claims a similar notion called base space, which is also similar to Croft's (1993) notion that the whole meaning of a sentence gives the parts meanings. That is to say, individuals can know the topic of a sentence but be unable to select the exact, appropriate lexical concepts and their meanings until they understand the whole sentence's meaning.

However, an informational characterisation might be associated with a complex noun phrase such as the following:

(83) FRANCE is a beautiful country, according to a recent survey of the aesthetic contribution of a range of European cultural traditions (Evans 2009a)

In this case, AESTHETIC PLEASURE is derived from the cognitive model of BEAUTIFUL, and NATION STATE is derived from the cognitive model of COUNTRY; both integrate into one informational characterisation. Once the integration of BEAUTIFUL and COUNTRY is derived as a lexical conceptual unit, it becomes a complex lexical concept, BEAUTIFUL COUNTRY, which accesses NATION STATE in the cognitive model of [FRANCE]. This complex lexical concept, BEAUTIFUL NATION, is also associated with the complex noun phrase 'a recent survey of the aesthetic contribution of a range of European cultural traditions'. Therefore, the complex informational characterisation of BEAUTIFUL NATION simultaneously matches with a distinct informational characterisation. This is constrained by the principle of simultaneous matching (P7), which states that when matching takes place between an informational characterisation and a complex lexical concept, it may occur simultaneously across cognitive model profiles (Evans 2009a).

In the *interpretation* process, activation occurs when a lexical concept accesses cognitive models. Activation occurs in each cognitive model until the lexical concept achieves final activation. This final activation is called primary activation. It occurs at the access point where a lexical concept finally arrives at a cognitive model with a high degree of resonance. Some other cognitive models also exhibit a form of resonance, which is called secondary activation. Therefore, when a lexical concept accesses a cognitive model directly, it is called its primary cognitive model, and when a lexical concept accesses a cognitive model indirectly, it is called its secondary cognitive model. I explain this in more detail in the section on cognitive models below.

Given lexical concepts in an utterance undergo the operation of *interpretation*; as a result, this establishes a sentence-level informational characterisation called conception. The conception then facilitates access to a cognitive model. A conception first accesses primary cognitive models, but if matching fails on the primary cognitive level, it requires a further—or secondary—cognitive model. This failure to match is called '*clash*', and a further matching cognitive model is called '*clash resolution site'*. Fusion (*lexical concept integration* and *interpretation*) aligns the schematic aspects associated with the lexical concepts undergoing the operation (Evans 2009a).

3.3.4 Cognitive Models

As mentioned previously, cognitive models comprise a conceptual system that contains rich conceptual knowledge including coherent and non-linguistic structure. Previous studies (Barsalou 1993; Fillmore 1982 1985; Langacker 1987; Kövecses and Radden 1999) discuss similar notions such as frame, ICMs and domains, but they have not clearly shown their semantic composition or described the process of going from a word to an intended sense and how and when it activates the target. The notion of cognitive models provided here complements these points. The LCCM theory discusses how utterance meaning arises and how lexical and constructional meanings are integrated into the semantic compositional process. Because lexical concepts are deeply related to meaning construction, a given lexical concept facilitates access to a set of cognitive models. That is, conceptual entities in the knowledge structure are specified by a lexical concept. In other words, a lexical concept establishes a set of cognitive models, which is afforded access by a lexical concept. This access site is called a cognitive model. Cognitive models include 'procedural bodies of knowledge' (Evans 2006b) related to culture and abstract entities, which are supported by stable or dynamic situations, experiences and environment. Consider the following examples and a partial cognitive model profile of [FRANCE] below. Cognitive models organise a unit of conceptual structure consisting of conceptual content in encyclopaedic knowledge.

(81) FRANCE has a beautiful landscape (Evans 2010)

(82) FRANCE rejected the EU constitution (Evans 2010)

The lexical concept [FRANCE] possibly refers to cognitive models such as NATION STATE, HOLIDAY DESTINATION or GEOGRAPHICAL LANDMASS and other entities connected with nodes. Each lexical concept of [FRANCE] activates its respective cognitive models; as a result, in example (81), the lexical concept [FRANCE] accesses GEOGRAPHICAL LANDMASS, while in example (82), it accesses NATION STATE, based on the contexts. When a cognitive model is accessed by a lexical concept, matching occurs between the lexical concept and cognitive models.

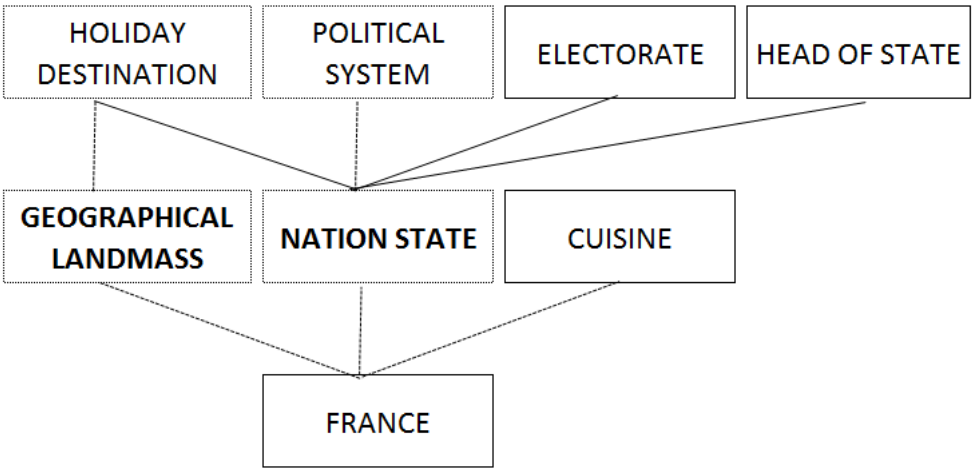


Figure 3.3 Partial cognitive model profile[34] of [FRANCE] (modified from Evans 2010)

3.3.4.1 Primary and Secondary Cognitive Models

Cognitive models are mainly divided into two levels: primary and secondary. Candidates for primary cognitive models are likely to be conventional, generic, intrinsic and/or characteristic knowledge. This notion adheres to Langacker's (1987) definition (also see 2.2.4). Conventionality is the general knowledge that conventionalised information is found in a speech community. It must be known by the entire discourse community and not by only one person or a few people. Genericness is also the knowledge of general information that can be shared within a speech community; compared to specific knowledge, generic knowledge should relate across the entire community. For example, the expression 'some people have a cat allergy' is highly generic, whereas 'my colleague has a strong allergy to cats' is more specific. Intrinsic knowledge should be information intrinsic to the entity rather than due to external entities. Characteristic knowledge is information unique to a given entity, as opposed to non-characteristic knowledge. Primary cognitive models are likely to meet all or nearly all of these

[3] A cognitive model profile refers to a set of cognitive models to which a given lexical concept affords access (Evans 2007).

[4] This is an example of how LCCM works in the lexical concept [FRANCE]. I have modified the location of the primary and secondary cognitive models since the original model has some odd connections between the two cognitive models. Note that odd points may still be found to take the step from primary to secondary cognitive model, but cognitive model profiles are dynamic and continue updating. Therefore, cognitive models are not completely the same for every person. Please refer to section 3.2.4.1 for an explanation of how primary and secondary cognitive models are divided.

conditions. Among this information, conventional knowledge is the most important and central, followed by generic, intrinsic and characteristic (Evans 2014).

Consider the following example of 'Shakespeare' in terms of the nature of primary cognitive models. Based on the above explanation, 'man' and 'author' should be primary cognitive models, while 'body of work' should be located in a secondary cognitive model. The two primary cognitive models are related to knowledge that is conventional, intrinsic and characteristic, matching most of the four criteria for constituting a primary cognitive model. The fact that Shakespeare was a man, for example, is conventional knowledge. Moreover, being a man is intrinsic to Shakespeare and is also characteristic of him. Similarly, the fact that Shakespeare was an author is conventional knowledge, it is intrinsic to Shakespeare in the sense that it arose from his own predispositions and impulses, and it is characteristic of him. In contrast, the cognitive model 'body of work' only counts as conventional knowledge. While the fact that Shakespeare produced a particular body of work may be widely known, this knowledge is intrinsic to and characteristic of the fact that he was an author, rather than being intrinsic to and characteristic of Shakespeare himself. As such, the type of knowledge captured by the 'body of work' cognitive model does not meet the criteria for being a primary cognitive model. This classification of knowledge according to the four knowledge types, in fact, more properly relates to four continua along which cognitive models can be classified (Evans 2014).

However, cognitive models are often individual and dynamic. People undergo new, different and unique experiences, and, in that sense, cognitive models can be dynamic. Conceptual knowledge also continues to be updated, such as by deleting and replacing cognitive models (Evans 2014). For example, a temporary trend is applied here. A singer releases a song called 'The King', and the song sells in huge numbers in a certain society; as a result, everyone knows the singer and the song. 'The king' originally indicates a person who rules a country, but because the song title 'The King' is widely known in the given society, the cognitive model profile 'the king' has a temporary cognitive model of 'song title'. However, once the trend passes, the cognitive model 'song title' is removed from the cognitive model profile of 'the King'.

Langacker, Croft (see Chapter 2) and Evans mention that because primary cognitive models can be directly accessed from a lexical concept, they should be well established within a same-speaking community as a kind of common knowledge. In terms of this, I agree with Langacker's, Croft's and Evans's ideas. However, it is still ambiguous what exactly

conventional, generic, intrinsic and characteristic knowledges are and the differences among them. In my understanding, conventional knowledge and general knowledge are very similar and sometimes overlap. Characteristic knowledge is a unique feature of a given concept. However, Evans (2010) claims that cognitive models are individually and culturally different, and each lexical concept has a unique cognitive model profile based on context. Therefore, although people live in the same community, it may sometimes occur that people do not share primary cognitive models. This is one of the reasons that lead to misunderstandings in a conversation. Therefore, I believe that primary cognitive models should be common and well-established knowledge rather than simply occurring in a same-speaking country. Therefore, this thesis adheres fundamentally to the above-mentioned scholars' notions of primary cognitive models but not more so. Primary and secondary cognitive models may be considered to be more flexible in this thesis.

3.3.5 Access Route Activation and Highlighting

This section considers the operation of activation. Activation is a result of matching between a lexical concept and a cognitive model. There are two types of activation: access route activation and highlighting. Access route activation can afford access to both primary and secondary cognitive models. Activation occurs in more than one cognitive model, which means that one of them undergoes the primary activation. Other activations are less resonant with a given vehicle and are called secondary activations. The primary activation activates a final appropriate cognitive model, while secondary activation is not final but activates several less-resonant cognitive models. Consider the following example:

(84) *France* voted against the EU constitution in the 2005 referendum (Evans 2009a)

The cognitive model profile of [FRANCE] consists of several cognitive models, and the activation path goes through cognitive model profiles afforded by lexical concepts, which is called the access route. The integration of lexical concepts, or, in other words, an informational characterisation, of [FRANCE] accesses potential cognitive models called primary cognitive models, including GEOGRAPHICAL LANDMASS, NATION STATE and HOLIDAY DESTINATION. In this primary cognitive stage, there is no match at this cognitive level; therefore, less-resonant activations occur in this cognitive level as secondary activations. After this failure to match,

conception (informational characterisation) requires a further, or secondary, cognitive model such as NATIONAL SPORTS, POLITICAL SYSTEM and CUISINE. However, the conception still does not match at this cognitive level. This matching is also called secondary activation. The conception then requires a further search in the higher cognitive models of CONSTITUTIONAL SYSTEM, ELECTORATE and HEAD OF STATE and matches with the higher secondary cognitive model of ELECTORATE, which is the final destination of the access route. This final matching is called primary activation. Therefore, if a lexical concept finds a high degree of resonance in a cognitive model, that match is the primary activation. A less-resonant activation, in which a lexical concept must look for another, more ideal cognitive model, is called secondary activation.

In Figure 3.4 adapted from Evans (2009a), the lexical concept [FRANCE] consists of primary cognitive models such as GEOGRAPHICAL LANDMASS, NATION STATE and HOLIDAY DESTINATION. These kinds of cognitive models can directly connect to [FRANCE] without any problems, which provides access to a sophisticated and large body of knowledge. The secondary cognitive models need further knowledge derived from primary cognitive models. For example, the primary cognitive model NATION STATE can connect with POLITICAL SYSTEM, CUISINE and NATIONAL SPORTS. Therefore, we have a large body of knowledge about a particular lexical concept and can extend further knowledge using the operation of *clash resolution*.

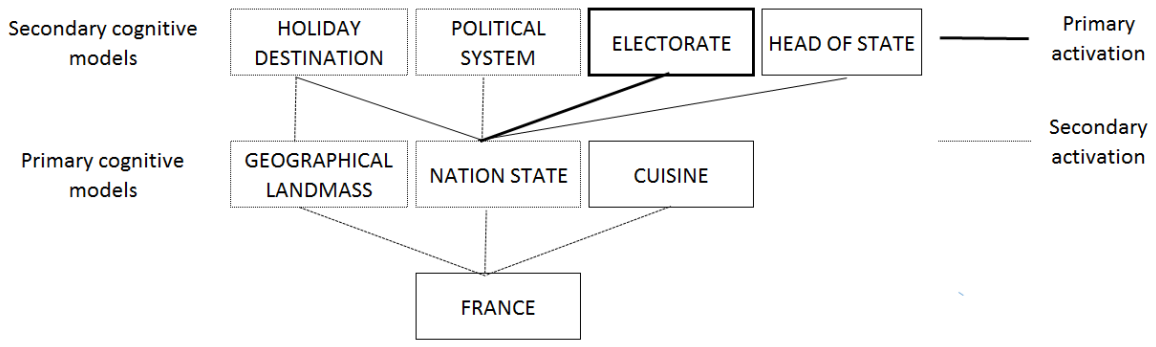


Figure 3.4 Access route established by the interpretation of [FRANCE] in the utterance *FRANCE voted against the EU constitution in the 2005 referendum* (modified from Evans 2009a)

So far, we have seen how access route activation allows a lexical concept to access a cognitive model in its cognitive model profile. The other type of activation is called a highlighting system. Unlike access route activation, activation by highlighting occurs within a

single cognitive model and creates a path from the cognitive model to its own facet. Each cognitive model sometimes involves facets, which, like attributes, are subordinate concepts, which are not independent slots like primary or secondary cognitive models but are conceptually related to one another in a frame (Evans 2010; Barsalou 1993). The highlighting system includes two forms: perspectivisation and adjustment. Perspectivisation encodes a non-relational lexical concept with noun forms. Consider the following examples:

(85) That's a heavy book [TOME] (Evans 2009a)

(86) That antiquarian book is illegible [TEXT] (Evans 2009a)

(87) That's a long book [DURATION] (Evans 2009a)

(88) That's an interesting book [LEVEL OF INTEREST] (Evans 2009a)

Example (85), 'That's a heavy book', describes the weight of a book. Figure 3.6 shows the relationship between lexical concepts, cognitive models and attributes. The lexical concept of [BOOK] associated with 'heavy' highlights the TOME facet, which is the attribute of [BOOK] belonging to the PHYSICAL STRUCTURE cognitive model. In this context, the physical properties in our knowledge refer to portability. The next example, (86), 'That antiquarian book is illegible', describes physical organisation or construction through the process of reading, which is associated with the attribute of TEXT. In this context, due to the ageing process, the book cannot be read properly. The lexical concept of [BOOK] becomes a slightly distinct informational characterisation in each example and perspectivises a distinct attribute. The common operation in both (85) and (86) is primary activation, which occurs in the PHYSICAL STRUCTURE cognitive model and highlights TEXT and TOME, respectively. The next examples, (87) and (88), are related to the READING ACTIVITY cognitive model. Example (87) refers to the duration of reading time, and example (88) refers to the level of interest. Both examples have a primary activation in the reading activity cognitive model before each attribute is highlighted. As such, perspectivisation does not shift the semantic meaning. The lexical concept refers to an internal concept but not an external concept.

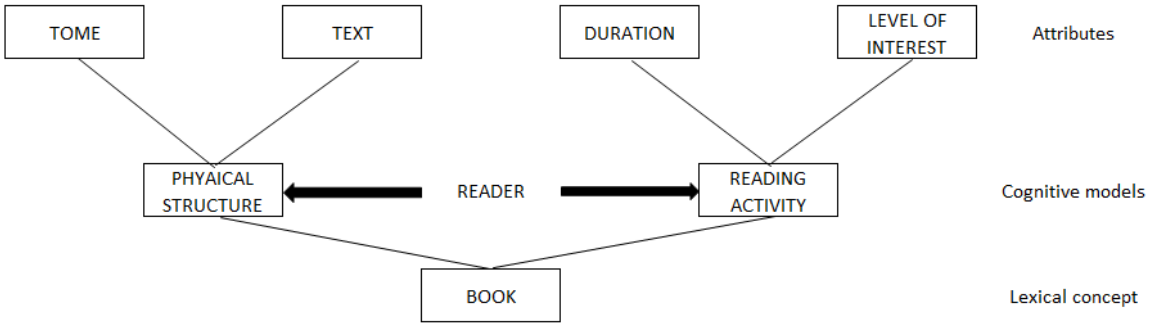


Figure 3.5 The relationship between lexical concepts, cognitive models and attributes (adapted from Evans 2009a)

The next step in the highlighting process is called adjustment. This encodes relational lexical concepts using adjectives, prepositions and verbs. As opposed to the process of perspectivisation, adjustment affects the quality of the knowledge structure; that is, it shows how an entity is highlighted (Evans 2006b). Consider the following examples:

(89) a small mouse (Evans 2006b)

(90) a small elephant (Evans 2006b)

(91) a red pen (Evans 2006b)

(92) a red squirrel (Evans 2006b)

(93) a good man (Evans 2006b)

(94) a good meal (Evans 2006b)

The sensory qualities of ‘small’ and ‘red’ can change meanings depending on our interpretation. Example (89), ‘a small mouse’, and example (90), ‘a small elephant’, refer to quite different

dimensions, but we can understand them without confusion. Example (91), 'a red pen', can be imagined as having a bright red colour, while example (92), 'a red squirrel', can be imagined as having a reddish-brown colour. People may use the same colour in the expressions – 'red' – but we can distinguish bright red and dark red in our minds. Individuals can adjust the gradation of colour variation. That is, each informational characterisation is encoded with proper cognitive models that focus on how we interpret contexts (Evans 2006b). Example (93) refers to physical beauty, honour and so forth. Example (94) refers to the size of the portion, the meal's taste, ingredients and so forth. There are several meanings possible depending on the context. Individuals can activate a certain point in their non-linguistic knowledge of 'good'; in other words, we can adjust the meaning of the knowledge (Evans 2006b). Evans claims that 'we adjust how the knowledge associated with good is being activated rather than what is being activated, a consequence of the relational (here attributive) nature of the lexical concept associated with good' (Evans 2006b:525). The highlighting system, unlike access route activation, occurs within a single cognitive model; that is, it shows the relationship between a cognitive model and its facets (attributes). A lexical concept highlights its own facets and not a cognitive model. In these terms, if lexical concepts involve the activation of a different cognitive entity, it is called perspectivisation; if lexical concepts adjust the properties of the same cognitive model, it is called adjustment.

3.4 Differences between Literal and Figurative Expressions

This section details the differences between literal and figurative expressions. Generally, literal expressions are read literally, using the original or basic meaning of a word, while figurative expressions use a peripheral meaning of a word. In the LCCM framework, a word generally divides its literal and figurative meanings by finding differential access sites in primary and secondary cognitive models. Consider the following examples:

(95) The rocket *went up* (in the sky) (Evans 2009a)

(96) The student's grades *went up* (during the course of the semester) (Evans 2009a)

In example (95), the words 'went up' indicate an upward vertical motion. 'Went up' is originally defined as relating to vertical motion in an upward direction along the vertical axis. The vehicle 'went up' is conventionally associated with the cognitive model UPWARD VERTICAL

MOTION, which is encoded in linguistic content and accessed by the lexical concept [WENT UP]. On the other hand, in example (96), the lexical concept [WENT UP] refers to the student's grades. In this case, the lexical concept [WENT UP] facilitates access to the higher secondary cognitive model IMPROVEMENT. As a result, example (95) can be literal while example (96) can be figurative.

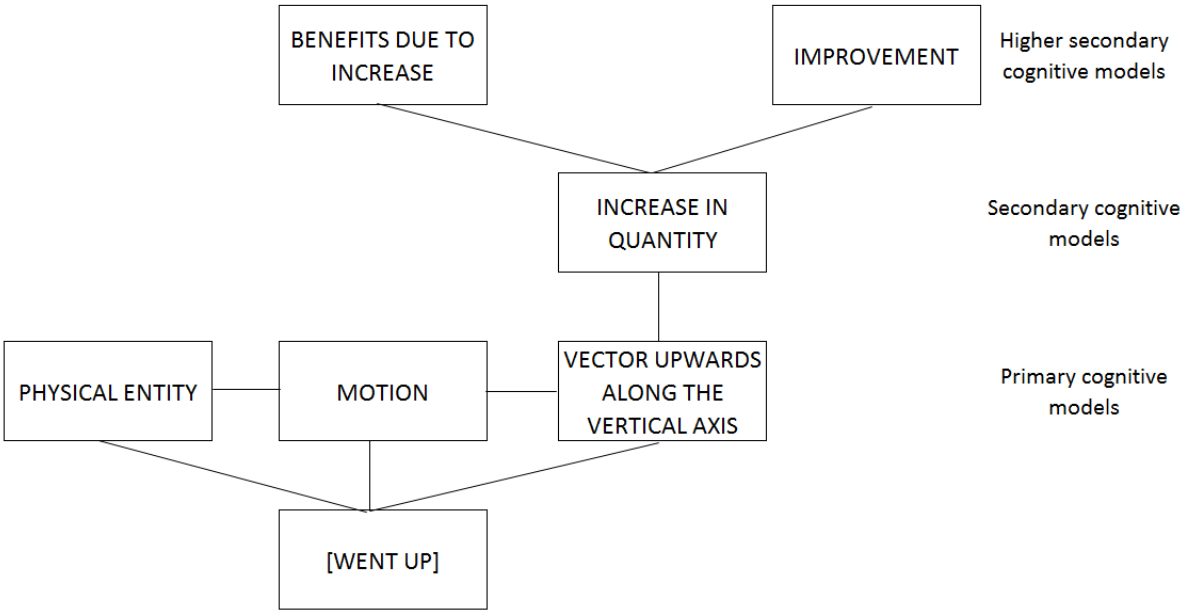


Figure 3.6 Partial cognitive model profile for [WENT UP] (adapted from Evans 2009a)

3.4.1 Clash Resolution

The important criterion for distinguishing a literal from a figurative expression is the operation of *clash resolution*. As opposed to literal expressions, figurative expressions include the *clash* operation, which is the failure to match a lexical concept with a cognitive model. After *clash*, further matching is required at a further cognitive model level that has a higher resonance than the previous one. This operation is called *clash resolution*. Consider the following examples in terms of the difference between literal and figurative expressions:

(81) *France* has a beautiful landscape (Evans 2010)

(82) *France* rejected the EU constitution (Evans 2010)

In example (81), a sentence-level informational characterisation is created through the operation of *interpretation*, which searches for the cognitive model of [FRANCE] and matches with GEOGRAPHICAL REGION in the primary cognitive model of [FRANCE]. As a result, this is a literal expression. On the other hand, example (82) is a figurative expression. The lexical concept [FRANCE] accesses a target in the secondary cognitive model by using the '*clash*' operation. The lexical concept [FRANCE] refers to the ELECTORATE MAJORITY that voted against implementing an EU constitution (Evans 2010:624). An informational characterisation of 'rejected the EU constitution' accesses the cognitive model of [FRANCE]. The informational characterisation needs to go through NATION STATE and POLITICAL SYSTEM before arriving at ELECTORATE in the higher secondary cognitive model of [FRANCE]. That is, the informational characterisation of 'rejected the EU constitution' fails to match with NATION STATE, POLITICAL SYSTEM and other less-resonant cognitive models. When an informational characterisation (vehicle) fails to match, it establishes a further search domain and provides access to secondary cognitive models (Evans 2010). The following figure shows the meaning construction processes in the LCCM theory in terms of the difference between literal and figurative conceptions (Evans 2010).

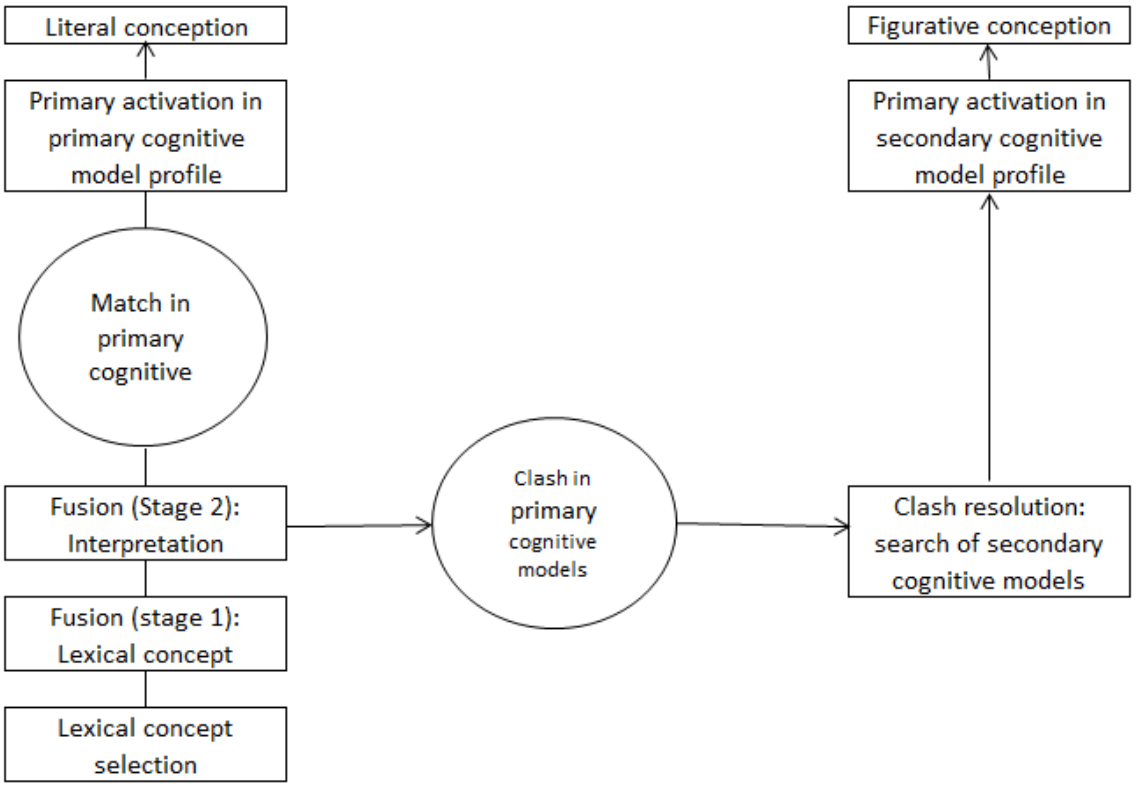


Figure 3.7 Meaning construction processes in the LCCM theory leading to literal and figurative conceptions (adapted from Evans 2010)

Putting it all together, in literal expressions, open lexical concepts are integrated and form a sentence-level informational characterisation, which is a conception of the sentence. The conception, or vehicle, accesses a cognitive model, the target. In more detail, a conception (vehicle) accesses primary cognitive models and matches with one of them. In contrast, in figurative expressions, the process of *lexical concept integration* is repeated until an informational characterisation arises. In figurative vehicles, conceptual content and literal content are different, and, therefore, the lexical concept (figurative vehicle) needs to fill in the lexical profile by repeatedly using the *integration* process. Repeating the fusion 1 operation fills all the slots of semantic affordances, which then become internally closed lexical concepts, and the *integration* is finally completed (Evans 2009a). Linguistic content is transferred to conceptual content through the fusion 1 operation. After that, a sentence-level informational characterisation (vehicle) indirectly accesses a secondary cognitive model. First, the vehicle activates all primary cognitive models, and if there is no proper entity in the primary cognitive

models, it requires further access to a secondary cognitive model. This activation failure is called secondary activation and leads to less-resonant matching. If a vehicle successfully matches with a cognitive model, this is its proper activation, which is called primary activation.

In sum, a literal conception arises as the result of a match between one or more cognitive models in the primary cognitive model profiles accessible via the lexical concepts used in a construction. This is subject to the principle of ordered search. A figurative conception (metaphorical or metonymic) results from a failure to match (*clash*) in the primary cognitive model profiles subject to matching and is resolved by a match in the secondary cognitive model profiles by accessing the appropriate or relevant cognitive models based on the context. This is subject to the principle of context-induced clash resolution (e.g., Evans, 2006; 2010; 2013).

3.4.2 Difference between Metonymy and Metaphor

This section reviews figurative expressions, in particular the difference between metaphor and metonymy. In both metonymic and metaphorical expressions, a lexical concept accesses a secondary cognitive model. They use the same operations in their processes, but there are some differences in how the processes are carried out.

3.4.2.1 Metaphor

The LCCM framework for metaphorical expressions uses two different, independent lexical concepts. Both vehicle and target undergo the same process that accesses each cognitive model and match with each other at a certain cognitive level. A lexical concept in metaphorical expressions accesses secondary cognitive levels through the *clash* operation. Consider the following metaphorical example:

(97) My boss is a pussycat (Evans 2009a)

In example (97), the lexical concepts [BOSS] and [PUSSYCAT] are different taxonomic concepts linked to each other. As shown in Figures 3.8 and 3.9, the lexical concepts of [BOSS] and [PUSSYCAT] undergo a *clash* in each primary cognitive model because there is no cognitive model associated with [PUSSYCAT] and [BOSS]. Both lexical concepts search for secondary

cognitive models, and the primary activation occurs there for each. Each lexical concept then becomes a figurative conception. The figurative target and vehicle are both linguistically encoded. The lexical concept of [PUSSYCAT] facilitates access to the secondary cognitive model DOCILE, while the lexical concept of [BOSS] accesses the secondary cognitive model of PERSONALITY. Finally, DOCILE and PERSONALITY link to each other. *Clash resolution* is subject to the principle of context-induced clash resolution, which states that if *clash* is required by context, the *clash resolution* is located on higher cognitive level than the location at which the *clash* occurred. For instance, when a *clash* occurs in a primary cognitive model, the *clash resolution site* is found in the secondary cognitive model.

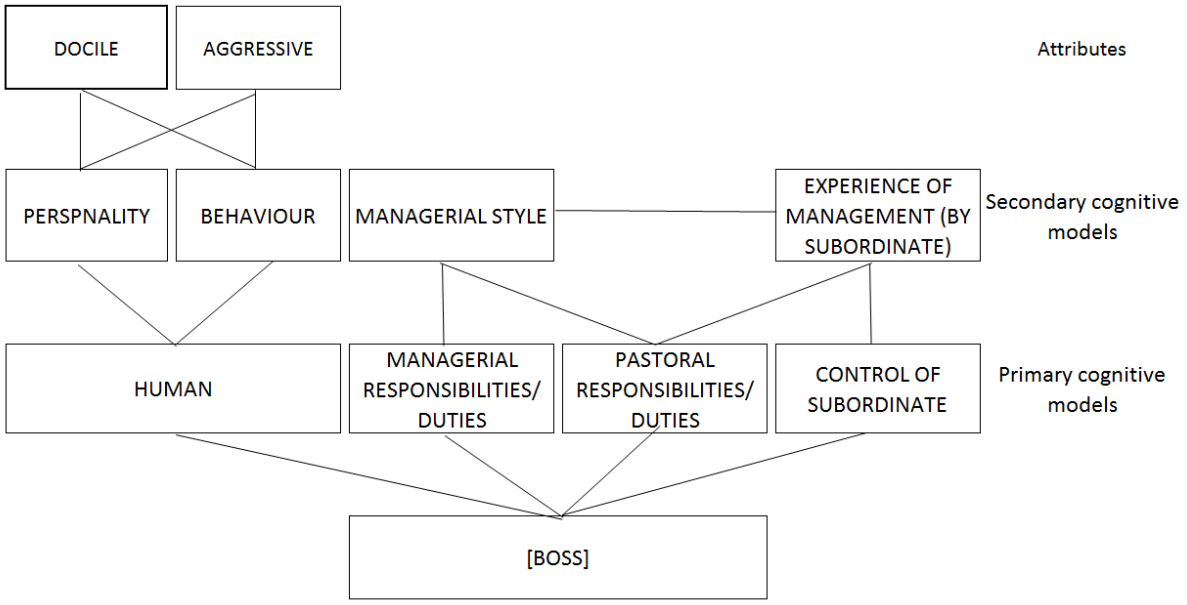


Figure 3.8 Partial cognitive model profile for [BOSS] (modified from Evans 2009a)

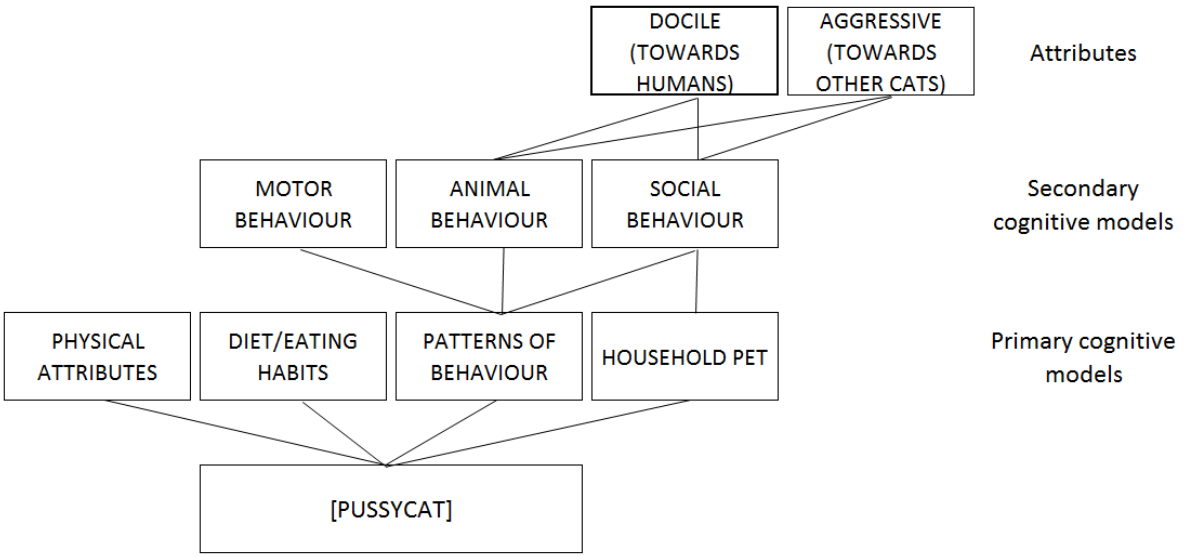


Figure 3.9 Partial cognitive model profile for [PUSSYCAT] (modified from Evans 2009a)

Therefore, metaphorical expressions need two different concepts that are linked to each other. As a result of *clash resolution*, both lexical concepts find the common point between [BOSS] and [PUSSYCAT], which is PERSONALITY. Finally, DOCILE and PERSONALITY are encoded.

3.4.2.2 Metonymy

Metonymic expressions also use the same process as metaphor in a cognitive model. Metonymic expressions are generally figurative; therefore, a metonymic vehicle facilitates access to a secondary cognitive model where it matches. Before accessing a secondary cognitive model, *clash* occurs in primary cognitive models. As opposed to metaphors, however, metonymic expressions provide matching within the same lexical concept. Consider the following metonymic expressions:

(98) The ham sandwich has asked for the bill (Evans 2009a [Lakoff & Johnson 1980])

As shown in Figure 3.10, the lexical concept of [HAM SANDWICH] is the figurative vehicle, and the CUSTOMER who ordered the sandwich is the figurative target. Unlike metaphor, metonymic vehicle matches with a target within a single cognitive model, [HAM SANDWICH]. A 'ham sandwich' is a food, so it potentially associate with VENUE, INGREDIENTS, APPEARANCE/COMPOSITION at the primary cognitive level and also further levels of cognitive

models, such as HOME, SHOP, CAFÉ/RESTAURANT and so forth. However, a 'ham sandwich' cannot 'ask for the bill' because a 'ham sandwich' should not be an animate entity. Therefore, the ham sandwich cannot match with those and accesses further cognitive level, the higher secondary cognitive model, CAFÉ/RESTAURANT CUSTOMER. In mode details, the lexical concepts of 'ask for' and 'bill' form a simple lexical concept and integrate as an informational characterisation. The lexical concept of [HAM SANDWICH] undergoes the integration of informational characterisation, and *a clash* occurs between the informational characterisation of 'ask for the bill' and the primary cognitive model of [HAM SANDWICH]. Due to the *clash* operation, the lexical concept of [HAM SANDWICH] goes through 'the customer who ordered the ham sandwich' in the secondary cognitive model. *The clash resolution* is subject to the principle of context-induced clash resolution.

The non-linguistic knowledge of a cognitive model can afford several levels of cognitive models, such as primary, secondary and more. As shown in the figures above, both metaphorical figurative vehicles access each secondary cognitive model, and the level is the same. In this case, it can be said that the metaphor above includes secondary cognitive level. In Figure 3.10, the figurative vehicle of [HAM SANDWICH] accesses the CUSTOMER, which is located in the second level of the secondary cognitive model. In this way, metonymic expressions include secondary cognitive level.

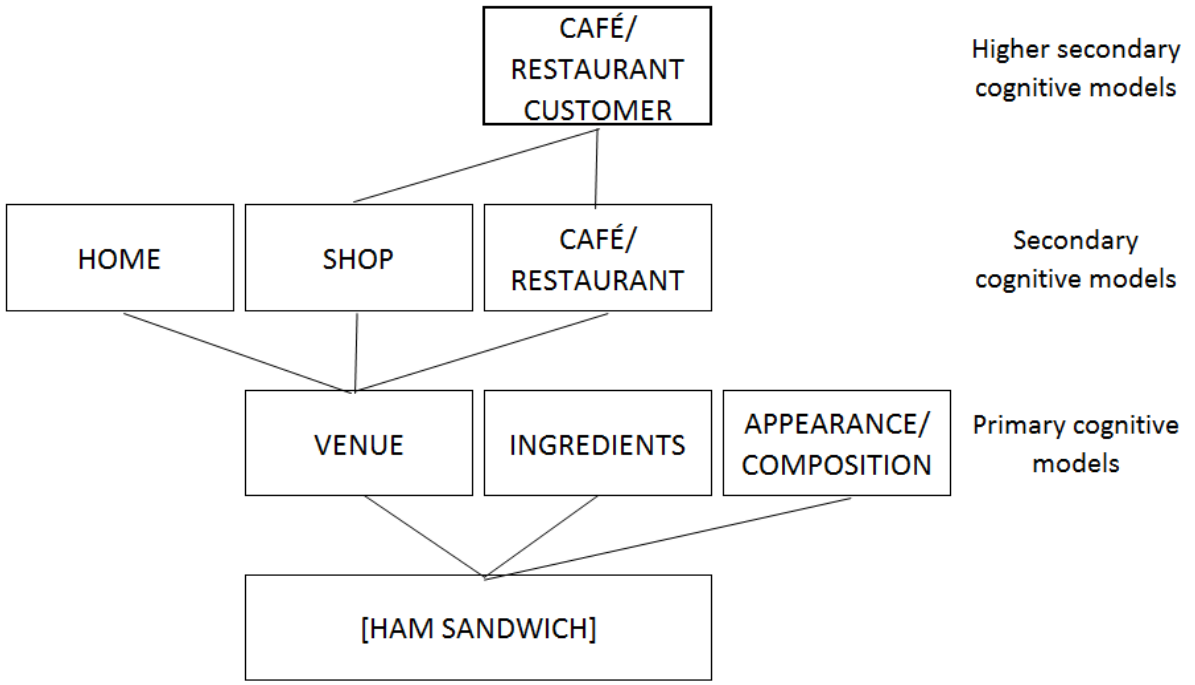


Figure 3.10 Partial cognitive model profile for [HAM SANDWICH] (modified from Evans 2009a)

The question of why individuals can choose different attributes in the same lexical concept in the understanding process needs to be addressed. This occurs because the appropriate lexical concept is selected due to linguistic and non-linguistic content. This is called *co-selection* in the LCCM theory. It relies on selecting the most mutually appropriate readings associated with each expression. Selecting the most appropriate lexical concept associated with a given form is a mutually involving symbiotic process. It also relies on knowing the topic, including the speaker's intention, the listener's assumptions, the preceding discourse, the non-linguistic context and so forth (Evans and Zinken, in press). That means that individuals are aware of the context, and, based on that awareness, they can interpret the figurative sentences properly. This is similar to Croft's (1993) discussion that understanding a whole sentence lets us understand the parts of the sentence. That is to say, once individuals interpret the whole meaning, they can also understand each word in a sentence.

3.4.2.3 Clash Resolution Sites and Alignment

The LCCM theory addresses the difference between metaphor and metonymy by showing the *clash resolution sites* and *alignmen*t. When a lexical concept fails to match in a primary cognitive model, the lexical concept undergoes a *clash* operation, and the lexical concept continues to search for a secondary cognitive model. This is called *clash resolution* (Evans 2009a). Metaphor and metonymy have different *clash resolution sites*. Consider the following example:

(97) My boss is a pussycat (Evans 2009a)

This metaphorical expression includes two different taxonomic cognitive models: a metaphorical vehicle, [PUSSYCAT], and a metaphorical target, [BOSS]. The figurative target accesses PERSONALITY, while the figurative vehicle [PUSSYCAT] accesses DOCILE, and an activation takes place here, in what is called the *clash resolution site*. In this way, metaphoric conceptions arise between figurative vehicles and targets across two distinct lexical concepts.

On the other hand, a metonymic expression is slightly different. Consider the following example of metonymy:

(98) The ham sandwich has asked for the bill (Evans 2009a [Lakoff & Johnson 1980])

In this example, the [CUSTOMER] is the figurative target and the [HAM SANDWICH] is the figurative vehicle. The figurative vehicle [HAM SANDWICH] accesses and activates the figurative target CUSTOMER within the same concept. Therefore, the *clash resolution site* is in the figurative target of CUSTOMER. Semantic construction in a metonymic expression occurs in the single cognitive model; that is, there is an alignment between the metonymic vehicle and target.

Therefore, the LCCM theory provides an account of figurative language understanding that can identify the distinction between literal and figurative expressions in cognitive models. In a literal meaning, a lexical concept accesses the primary cognitive model, which arrives at the literal conception; in a figurative conception, a lexical concept accesses the secondary cognitive model. According to the LCCM theory, figurative expressions use relatively the same process as literal expressions, but the difference is whether the *clash* occurs in the semantic compositional process. The difference between metaphor and metonymy is whether *clash*

resolution takes place in a figurative target and whether there is alignment between a figurative vehicle and target.

However, this notion of *clash* and *clash resolution sites* is very ambiguous. At first, there was no evidence that *clash* occurs between a given lexical concept and its cognitive models. However, Evans claims that psychological approaches (e.g., Giora 1989, 1997) have supported the notion of *clash* because literal expressions tend to be understood faster than figurative expressions; because of the *clash*, figurative expressions are understood a little bit later. It might be true that *clash* is related to understanding speed, but there is no way to investigate whether a *clash* occurs when a given lexical concept accesses each cognitive model in the LCCM theory. In addition, Gibbs (1993), Giora (1997) and other researchers also claim that conventional expressions (including figurative expressions) are sometimes understood quicker than literal expressions. If we follow the hypothesis that *clash* and *clash resolution* occur in figurative understanding, there can be a clear distinction between metaphor and metonymy. Here I assume that the difference between metonymy and metaphor in LCCM theory is based on traditional theories (e.g. CMT) because LCCM theory also notes that metonymy demonstrates alignment between figurative vehicle and target; in metaphor, on the other hand, the linkage between figurative vehicle and target disappear. However, this means that metaphor and metonymy can have clear-cut distinctions. This completely opposes my claim in this thesis because I claim that there is a continuum between metaphor and metonymy that even includes literal expressions.

Therefore, in this thesis, since the operations of *clash* and *clash resolution* have not been clearly established in the literature, I set aside their possibility even though I use the utility of the LCCM theory, which focusses on meaning construction and can analyse conceptual links between sources and targets systematically. Therefore, I simply state that if certain paths are followed for whatever reason (whether under the influence of *clash* or not), a given metonymy or metaphorical effect is achieved, without trying to justify why those particular paths are taken in a given case. The important distinction between metaphor and metonymy is whether a conceptual alignment survives between a figurative vehicle and target, and the difference between literal and figurative expressions is based on the level of primary or secondary cognitive models.

3.5 Conceptual Metaphor and LCCM Theory

This section considers how CMT and the LCCM theory are conflated and how conceptual metaphors are shown in the LCCM framework. The LCCM theory is influenced by CMT and other traditional theories. Conceptual metaphor theory insists that conceptual metaphors use 'one-to-one domain mapping', which is derived from our experiences stored in long-term memory. Recently, researchers have further developed CMT and introduced primary and compound metaphors, which include complex bodies of knowledge in terms of understanding figurative language (the process of blending domains). By contrast, the LCCM theory (Evans 2010) claims that a lexical concept provides access to a cognitive model in a non-linguistic knowledge structure, which is a kind of multi-domain association. The common denominator in all these theories is the match between a figurative vehicle (source) and target that takes place in conceptual knowledge. Evans (2010) argues that there are several differences between CMT and LCCM.

Traditional theories such as CMT stress background knowledge—which is the conceptual integration of how language deploys and interfaces with non-linguistic knowledge structures—and overlooked actual language use, which consists of the knowledge of language, grammar, pattern recognition skills and intention reading skills. Thus, the traditional theories discuss conceptual processes of understanding but do not argue how words derive from and constrain the contexts of use. By contrast, the LCCM theory and other researchers (Langacker 2000; Croft 2000; Tomasello 1999, 2003) argue that word meaning requires a principle of word meaning in language use. That is, words and meanings do not match one to one every time; rather, the interpretation should be based on context and experience. Therefore, meanings can shift in different situations.

3.5.1 Clash Resolution and Semantic Affordances

The operation of *clash resolution* is an important notion in the LCCM approach. In order for figurative language to be understood, '*clashes'* occur in primary cognitive models due to a matching failure between vehicles and cognitive models before a lexical concept accesses a final activation, or a secondary cognitive model. In the figurative language understanding process, cognitive models include a vast number of potential cognitive models (inferences)

from a given lexical concept. These are called semantic affordances, which are immanent in the cognitive model. Therefore, inferences originally derive from a lexical concept before the operation of lexical concept selection starts (Evans 2010). I explain this in more detail below. Consider the following example:

(99) Christmas *whizzed by* (this year) (Evans 2010)

The lexical concept of 'whizzed by' includes a number of potential interpretations for understanding the semantic affordances. For example, semantic affordances of 'whizzed by' can be 'rapid motion', 'a distinct audible sound', 'lack of detail associated with the object of motion' and 'limited durational elapse to observe object of motion', among others.

Consider the following examples in terms of meaning shift:

(99) Christmas *whizzed by* (this year) (Evans 2010)

(100) Christmas is *approaching* (Evans 2010)

From the CMT perspective, both examples are derived from an ego-based conceptual metaphor for [MOVING TIME]. Individuals interpret Christmas as an object moving in space; that is, people understand Christmas as a moving object in both contexts (Evans 2010). By contrast, the LCCM perspective is slightly different and considers semantic affordances of 'Christmas', 'approaching' and 'whizzed by'. Example (100) indicates that 'Christmas' is imminent because 'approaching' is related to 'relative imminence', while example (99) means that 'Christmas' has passed because 'whizzed by' is related to 'elapsed time'. As such, the LCCM approach can provide more accurate word meanings due to its unique mechanism.

3.5.2 CMT's Special Level of Cognitive Model

In CMT, metaphorical expressions use stable cross-domain mapping which inhere in long-term memory (Lakoff & Johnson 1980). The LCCM theory, however, does not have recourse to use CMT operations to interpret figurative expressions. The LCCM theory insists that conceptual metaphors have a special level of cognitive models in non-linguistic knowledge. Consider the following example in terms of a combination of CMT and the LCCM theory:

(100) Christmas is approaching (Evans 2010)

As discussed above, example (100) uses an ego-centred conceptual metaphor for MOVING TIME. It includes a mapping system from a figurative vehicle and target, which is based on long-term memory. From the LCCM perspective, conceptual metaphors use a cognitive model as normal as those of other metaphorical expressions and also include an additional level of non-linguistic knowledge. When individuals understand example (100) as 'Christmas is located in the future', the interpretation process is as follows. In Figures 3.11 and 3.12, each lexical concept of [CHRISTMAS] and [APPROACHING] matches with a primary cognitive model. After that, the lexical concept of 'Christmas' accesses the conceptual metaphor of TIME IS MOTION OF OBJECTS (ALONG A PATH). The lexical concept of [CHRISTMAS] has the notion of an object in motion. Then, it must be considered which tense matches with [CHRISTMAS], such as PAST, PRESENT or FUTURE. In this example, [CHRISTMAS] is matched with FUTURE because of [APPROACHING], a DIRECTED MOTION OF ENTITY.

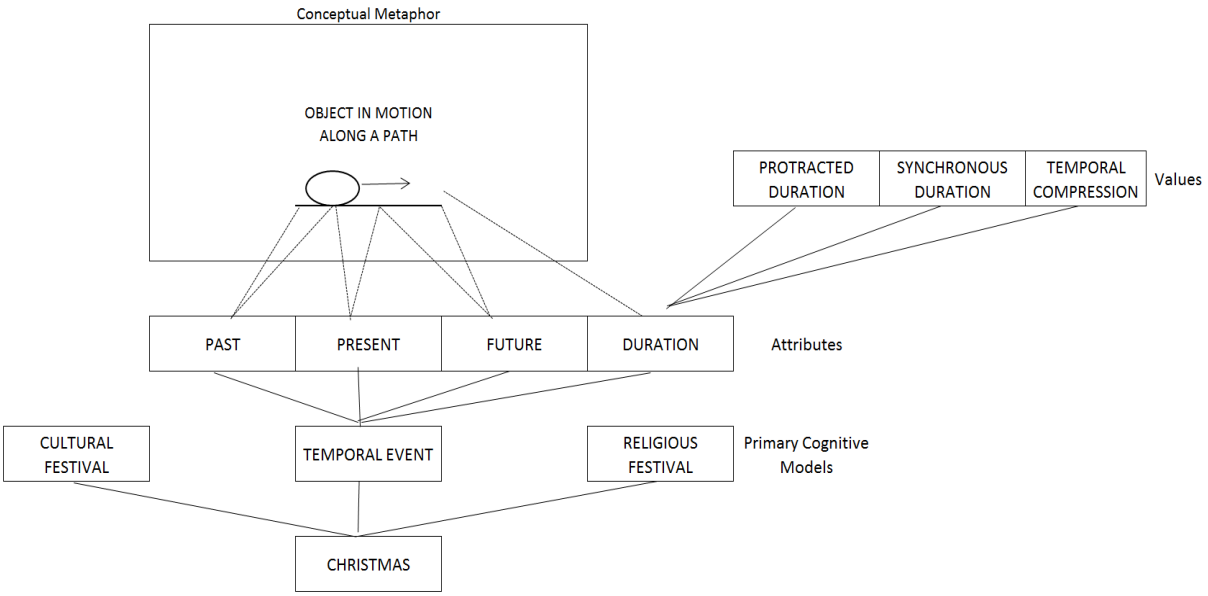


Figure 3.11 Partial primary cognitive model profile for [CHRISTMAS] (adapted from Evans 2010)

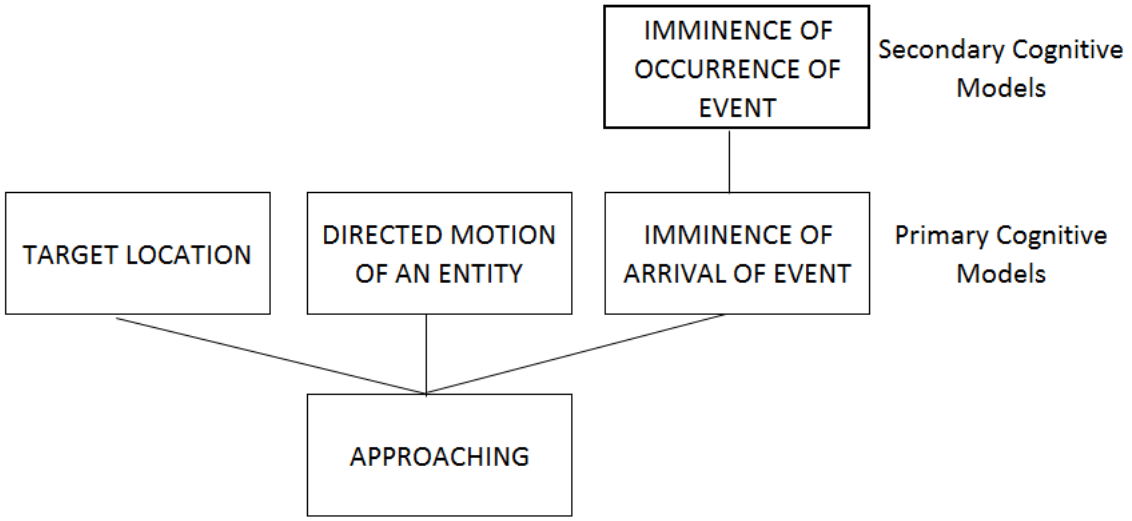


Figure 3.12 Partial cognitive model profile for [APPROACHING] (adapted from Evans 2010)

The LCCM theory does not disallow the entire CMT perspective, but conceptual metaphors can also work in the LCCM framework as special cognitive models. When a conceptual metaphor matches with lexical concepts, this is called conceptual metaphor matching, which is different from general matching. However, a conceptual metaphor itself does not have any figurativity. Therefore, the position of a conceptual metaphor in a cognitive model provides a special level of cognitive model.

3.5.3 Figurativity of Conceptual Metaphor

This section discusses the difference between conceptual metaphors and figurative expressions in terms of the level of figurativity. As mentioned in the previous section, conceptual metaphors have a special class of knowledge in cognitive models. Consider the following example:

(101) I hit the roof (Evans 2010)

Example (101) has at least two meanings: literal and figurative. The literal reading is 'I physically punched the roof', while the other is the idiomatic (figurative) meaning, 'I flew into a rage', which is derived from a conceptual metaphor INSANE BEHAVIOUR STANDS FOR ANGER.

From the perspective of the LCCM theory, both interpretation processes are relatively the same. In both cases, the lexical concept—[X EXERTS TRANSFER OF ENERGY WITH RESPECT TO Z] and [X BECOMES VERY ANGRY]—encodes distinct semantic values, which become a semantic unit. They are then conventionally associated with a given form, and, as a result, two different meanings are established (Evans 2010). In addition, as opposed to the lexical concept of [X EXERTS TRANSFER OF ENERGY WITH RESPECT TO Z], the lexical concept of [X BECOMES VERY ANGRY] is more saliently associated with the grammatical forms 'I hit the roof' (subject hit + tense the roof) and [X BECOMES VERY ANGRY] (subject becomes + tense very angry). This is based on psycholinguistic studies (e.g., Giora) stating that the most salient reading corresponds more closely to the idiomatic reading associated with the lexical concept in [X EXERTS TRANSFER OF ENERGY WITH RESPECT TO Z] than [X BECOMES VERY ANGRY]. Therefore, the lexical concept of 'I flew into a rage' is a more salient reading than 'I physically punched the roof'.

An important notion in the LCCM perspective is that example (102) does not include any 'matching' or *clash resolution*. In the LCCM operation, the lexical concept of [X BECOMES VERY ANGRY] undergoes the process of *interpretation*. During that process, the lexical concept provides a semantic unit, which is the whole meaning of the sentence 'I flew into a rage'. The single concept shows the entire meaning of the expression; in other words, the lexical concept shows the meaning itself without any *matching* or *clash resolution* (Evans 2010). A psychological approach (e.g., Giora 1997, 2002) also supports this process. Conventional meanings (e.g., 'I flew into a rage') are sometimes understood quicker than literal meanings (e.g., 'I physically punched the roof') because individuals are more used to conventional expressions than literal expressions. People have established a line of conventional expressions by using them repeatedly; therefore, a vehicle can directly access a target in a cognitive model. In terms of how conceptual metaphor is interpreted in the understanding process, the LCCM framework can be compatible with a psychological approach.

Nevertheless, if the *clash* operation does not occur in the process of *interpretation*, the expressions are identified as literal. That is, this idiomatic expression derived from a conceptual metaphor, [INSANE BEHAVIOUR STANDS FOR ANGER], is no longer a figurative expression. Consider the following examples in terms of their relationships with conceptual metaphors:

(102) That is a *loud* shirt (Evans 2010)

(103) They have a *close* relationship (Evans 2010)

(104) She is *in* love (Evans 2010)

(105) That took a *long* time (Evans 2010)

These examples each involve several lexical concepts, but one is chosen based on context. In example (102), 'loud' refers to a brightly coloured shirt; the word 'close' in (103) refers to emotional closeness; the word 'in' in (104) indicates an emotional state; and the word 'long' in (105) refers to an extended duration. These examples do not use a *clash* operation.

This reveals that these meanings and their grammatical forms have become deeply connected and conventionalised in the mind. As a result, these conventionalised meanings are conceptually closer than before they were conventionalised. The cognitive model has shifted from secondary to primary or constructed a special level of cognitive models so that no *matching* or *clash* occurs in the process of *interpretation*.

In short, CMT and the LCCM theory approach figurative expressions in slightly different ways. However, conceptual metaphors can work in the LCCM framework because they use conceptual knowledge in cognitive models that include a special level of figurativity. Therefore, the LCCM theory can be compatible with CMT, and it defines conceptual figurative expressions and figurative expressions through its unique mechanism.

In my understanding, because conceptual metaphors are stored in our long-term memory and we can flexibly access them in our memory, they do not undergo a *clash* operation and, as a result, they do not have a figurative level; conceptual metaphors are located in the primary cognitive level. Since the collaboration between the LCCM literature and CMT is ongoing, Evans does not clearly explain how conceptual metaphors work in metaphorical networks. However, as mentioned, the understanding process including conceptual metaphors do not occurs *clash*, and, as a result, they do not have figurativity because of salience. This is understandable because conventional expressions (including conventional figurative expressions) also do not have figurativity.

3.6 Symptoms of Figurativity

This section considers the notion of figurativity. Figurativity is defined in different ways in different fields. In general, metaphoricity is described as the power of metaphor that expresss a relation between metaphorical source and target, presumably. Depending on how you pick up words or how to link words, the expression might have special meaning or effect in the conversation. From a psychological or pragmatic approach (e.g., Giora 1997, 2002; Coulson 2008; Sperber and Wilson 1995), it is related to the indirect process of reaching a target. Individuals can understand literal expressions directly due to the principle of literal first approach. Figurative expressions can be understood indirectly, since individuals first try to understand the literal meaning, which is related to the understanding speed (e.g. Giora 1997). Literal expressions are understood faster than figurative expressions also because of the principle of literal first approach. Individuals understand literal expressions without any obstacles, while understanding figurative expressions requires additional processes.

Technically speaking, the notion of figurativity in this thesis is different from the metaphoricity in general. The thesis focuses on each concept (source (vehicle) and target) and observes how much the lexical concept extended the meaning. Then the higher one is counted in a metpaphorical case. Therefore, the thesis dose not consider the power of metpahor but observes the meaning extension of lexical cocnepts in metaphorical source and target. Nontheless, I assume that the notion of figurativity is also related to metaphoricity in some way. This is take a note for the future research.

The LCCM theory (Evans 2010) focusses on the access route length and the '*clash'* operation in the LCCM framework. The access route length is the distance from a lexical concept (a figurative vehicle) to a cognitive model (a figurative target). If a lexical concept accesses a primary cognitive model, the conceptual distance is shorter and the figurativity is zero. On the other hand, if a lexical concept facilitates access to a secondary cognitive model, the distance is longer and the figurativity is higher. When a lexical concept accesses secondary cognitive models, the *clash* operation has already occurred at the primary cognitive level, and the final match is achieved at the secondary cognitive level. If a figurative vehicle accesses a higher secondary cognitive model, which is higher than a secondary cognitive model, *clash* occurs twice: at the primary and secondary cognitive levels. As a result, the expression has a longer distance and higher figurativity.

However, this thesis does not incorporate the notion of '*clash'* and '*clash resolution* sites' (see the section 'The Difference between Metaphor and Metonymy: *Clash Resolution Sites* and Alignment'). Therefore, I simply mention that if a figurative vehicle accesses a primary cognitive model, it is literal, and if a figurative vehicle accesses a secondary cognitive model, it is figurative. Furthermore, this thesis follows the notion of the strength of metonymic connection (e.g. Panther & Thornburg 2003). When metonymic source (vehicle) and its target conceptually close, the metonymic link will be stronger while a metonymic source (vehicle) and its target conceptually have some 'distance', the metonymic link will be weaker. If a metonymic link is weaker, the figurativity is higher while a metonymic link is weaker, the figurativity is lower. However, unlike metonymy, metaphors consist of two cognitive models: source and target, that is, either a metaphorical source or its target which provides access to a higher cognitive model is approved as the figurativity of the sentence.

In conventionalised figurative expressions, it seems that figurativity has disappeared. This is because conventionalised figurative expressions have already established a special path to reach a target, supported by a conceptual relationship or conceptual metaphors (see CMT in Section 3.5). Following this notion of CMT, I hypothesise that metonymic conceptual relationships are also applied to this special path. Some metonymic relationships are conventionalised or have salience, and, as opposed to other cognitive models, they connect easily.

3.7 Comparison with Other Approaches

This section considers other approaches related to the LCCM theory and discusses their similarities and differences. For example, CMT (Lakoff & Jonson 1980) is one of the earliest cognitive linguistic theories related to understanding figurative expressions. CMT claims that figurative meaning construction is established by mapping to the relevant conceptual metaphor. In LCCM theory, on the other hand, the lexical concept accesses a cognitive model in a vast body of non-linguistic knowledge. Therefore, the definition of meaning in CMT tends to be narrower and ignores the dynamic aspects of meaning construction. The LCCM theory can make meaning in various ways, which allows for more flexible meaning construction. Another difference is that the LCCM theory is based on usage, while CMT focusses on a perspective of embodied cognition, which does not properly explore language phenomena. The LCCM theory

treats figurative expressions as general meaning constructions and literal expressions, grounding them in situated language use. The LCCM theory does not attempt to explore the difference between literal and figurative languages; rather, it claims that there are different levels of figurativity between literal and figurative expressions, suggesting that the same framework can apply to literal and figurative expressions and there is some continuum between them.

The LCCM theory is also inspired by Croft's (1993) domain highlighting, which integrates perspectives of both CMT (Lakoff & Johnson 1980) and Langacker's (1987) notion of domain theory. One of the differences between Croft's concept and the LCCM theory is that Croft sets up different understanding processes for metaphor and metonymy, such as domain mapping and domain highlighting. The LCCM theory uses the same understanding process for metonymy and metaphor, with a figurative lexical concept affording access to secondary cognitive models. Croft considers the difference between primary and secondary meanings, but his theory is still ambiguous about what primary and secondary domains are (see the 'book' discussion in Chapter 2). The LCCM theory also distinguishes primary and secondary cognitive models but shows their access routes. In these terms, the LCCM theory can describe 'attributes' more clearly and, as a result, can explain the ambiguity between literal and metonymic expressions.

The LCCM theory is sometimes described as similar to Relevance Theory (Sperber & Wilson 1995) because both theories claim that literal and figurative understanding use approximately the same process. When an addresser uses figurative expressions, the listener tries to find the most relevant meaning. The addressee accesses the literal meaning first, and if the figurative vehicle cannot match a literal meaning, it accesses a figurative meaning. This is called 'loose use of concept' in Relevance Theory and '*integration'* and '*interpretation'* in the LCCM theory. Both theories state that an utterance's intended meaning cannot be understood until the semantic representation is processed in the encyclopaedic knowledge. However, the two approaches have decisively different perspectives. Relevance Theory focusses on a truth-based approach, while the LCCM theory focusses on the relationship between language and cognition and, in particular, on the semantic flexibility in language (forms). Relevance Theory claims that understanding figurative expressions requires extra effort, which can require a longer understanding process. However, Giora (1997, 2002) conducts an experiment and finds that literal expressions tend to be understood faster than figurative expressions, but

conventional figurative expressions can be understood as fast as literal expressions (Graded Salience Hypothesis). Therefore, we do not always need extra effort to understand figurative expressions. The LCCM theory supports her claim and can explain it by using a cognitive model framework of conceptual metaphors, which have a special cognitive level (see Section 3.4.2).

In short, the LCCM theory has some similarities to and differences from other figurative understanding theories. However, it can be said that the LCCM framework is more practical and is compatible with other theories because it considers both the perspective of language form and the embodied cognition of figurative expressions. Based on that perspective, this study seeks to find a fresh symptom for understanding figurative expressions and cognition.

3.8 Summary of LCCM Framework

This chapter has reviewed the LCCM theory and related studies. The central insight of the LCCM theory is that meaning is not the property of words or linguistic units but is a function of language use, while lexical concepts consist of semantic units conventionally associated with linguistic forms (Evans 2006b, 2009a, 2010). The LCCM theory treats the semantic values (meanings) associated with linguistic forms (words) as variable and highly dependent on the context. This means that the LCCM theory can treat literal/metonymic/metaphorical instances of language as continuous, deriving from processes of meaning construction. In addition, central to the LCCM theory is its modelling of linguistic and conceptual knowledge structures as independent structures. Thus, this model can be used to systematically explore how different types of structures interact in the process of constructing situated meanings, bring about different or multiple associations between source (vehicle) and target or the elimination of the link between them. Other researchers have not provided such a model, as their works are not as concerned with meaning construction as LCCM theory is.

In the LCCM framework, after lexical concept selection, an appropriate lexical concept provides access to encyclopaedic knowledge through the operations of *fusion* and *interpretation* and acquires a sentence-level meaning. A given lexical concept (vehicle) accesses a cognitive model; if the lexical concept provides access to a primary cognitive model, it is literal, and if the lexical concept provides access to a secondary cognitive model using a ‘clash’ operation, it is figurative. The major difference between metaphor and metonymy in the LCCM framework

is that metonymy operates within a single concept, while a metaphorical operation straddles two different concepts. More specifically, the two phenomena have different access sites. A metonymic vehicle accesses a target and the matching occurs in the same concept (vehicle), and, as a result, the final access site is in that vehicle. Metaphor, on the other hand, includes two different concepts, and each figurative vehicle and figurative target accesses its cognitive models respectively, which then associate with each other. Therefore, following the principle of context-induced clash resolution, the metaphorical access site is always in the figurative target's cognitive model. In short, the assumption of the LCCM theory is that literal and figurative language arises from the same compositional mechanisms.

However, as mentioned above (3.4.2.3), this thesis uses the LCCM framework, but the notions of *clash* and *clash resolution site* are not taken into account. These concepts have not been established in recent studies and are not relevant to the purpose of my thesis, which is to investigate the relationship between metaphor and metonymy and how metonymy works in metaphor. In addition, my thesis generally uses the notion of the LCCM framework but also corroborates with other researchers' notion (see Chapter 4 and 5). Since the thesis highly focuses on *interpretation* processes of figurative expressions, therefore, unrelated notions or processes in the LCCM work are omitted in my thesis. However, this is not affect to the quality of my analysis.

In the following two chapters particularly focusses on meaning construction and the linkage between source (vehicle) and target in the literal/metonymic/metaphorical continuum by corroborating other researchers' continuum views. As a result, I systematically account for the continuum based on the access path between source (vehicle) and target. The next chapter discusses and provides an analysis of a number of different types of metonymic expressions.

Chapter 4

Different Levels of Figurativity in Metonymic Expressions

4.1 Introduction

This chapter addresses the research question, 'Is metonymy, in fact, a unified phenomenon? And how are metonymies motivated?' I also consider the development of metonymic understanding and how metonymy is defined as a unified phenomenon. The chapter mainly places the analysis within the framework of the LCCM theory discussed in Chapter 3.

As seen in the literature review, metonymy has recently been highlighted by many researchers who have found a number of new insights specific to metonymy. There are several ways to understand metonymic expressions, including a unified account of conceptual contiguity (e.g., Kövecses, & Radden 1998; Lakoff & Johnson 1980), the referential approach (e.g. Langacker 1993), a prototypical account based on referentiality (Barcelona 2003, 2011), domain highlighting (Croft 1993) and conceptual gradation (Dirven 1993; Radden 2002). As such, many researchers have attempted to determine the different features of literalness, metonymy and metaphor in order to identify them as distinct phenomena. Some researchers (e.g., Barnden 2010; Goossens 1990; Radden 2002; Ruiz de Mendoza 2000; Warren 2006) have explored ways to define the relationship between source (vehicle) and target that differ from those in traditional accounts, since it is difficult to find a clear-cut border between the two domains.

Despite the important insights of such accounts, those studies only show linguistic examples as evidence for a literal/metonymic/metaphorical continuum and/or a spectrum phenomenon between metonymy and metaphor but do not show an established framework for identifying this continuum phenomenon. Therefore, this thesis inheres the notion of continuum but adds a cognitive framework in the LCCM theory. In particular, I employ the symptom of the access route length between a linguistic vehicle and target in conceptual knowledge to examine the different levels of figurativity in the LCCM framework. Recall that when individuals understand a linguistic utterance, the interpretation involves the selective activation and *interpretation* (fusion) of part(s) of the cognitive models accessible through the words involved in the interpretation in accordance with the syntactic constituency of the utterance

(Evans, 2006; 2009a). A literal conception is the result of establishing a match between one or more cognitive models in the primary cognitive model profiles accessible via the lexical concepts used in a construction while a figurative conception (metaphorical or metonymic) arises from the semantic gap (strength of the conceptual link) between a source (vehicle) and its target. (See Chapter 3).

This study elaborates on that theory, inspired by the analysis of Dirven's (2002) notion of conceptual gradation, in which literal, metonymic and metaphorical expressions are conceptually in line, and by the phenomenon of pre-metonymy as intermediate between literalness and metonymic meaning. It also incorporates Radden's (2002) notion that the role of metonymy is a gradational transition of words from literalness to metaphor, rather than a well-defined shift from one conceptual domain to another. Bringing together Dirven's and Radden's works and the LCCM theory (Evans 2006b, 2009a, 2010) provides the systematic framework for approaching the literal and metonymic process of constructing meaning. I apply their notions to the argument of how to connect source (vehicle) and target and relate it to the distinction between literalness, metonymy and metaphorical expressions by examining a number of linguistic examples.

This thesis hypothesises that there is a conceptual spectrum or gradation between literal and metaphorical expressions, and metonymic expressions are somehow located in a middle position between literal and metaphorical expressions in light of the levels of figurativity. In this context, metonymic figurative (conceptual) levels are divided in several ways. However, researchers have not shown a systematic framework of how conceptual gradation is established among literal, metonymic and metaphorical expressions. I complement the conceptual gradation approach by adding a cognitive model and treating pure/prototypical metonymic expressions and different kinds of metonymic expressions (Evans 2006b, 2009a, 2010).

The remainder of this chapter is structured as follows. In Section 2, I briefly describe issues surrounding the interaction between literalness and metonymy found in the literature. Section 3 provides an analysis by adjusting the LCCM models. Section 4 discusses further analysis about the difference between original metonymic expressions and conventionalised metonymic expressions in light of how metonymic vehicles access cognitive models. Section 5 discusses and concludes that there is a literal/metonymic/metaphorical continuum.

4.2 Issues

Researchers have often claimed that literal expressions always involve a primary (central) meaning while metonymic expressions involve a secondary (peripheral) meaning. However, previous metonymic accounts only consider prototypical metonymic expressions that clearly involve a secondary meaning. Based on the prototypical approach, they conclude that literal and metonymic expressions have a certain difference whereby literal expressions involve a primary meaning while metonymic expressions involve a secondary meaning. However, since there are many types of metonymic expressions that are prototypical and metonymic expressions that are different from the prototype and close to literal and metaphorical expressions, we should also work to analyse these different types of metonymic expressions.

First, I consider the metonymic expressions that are close to literal expressions. Consider the following examples. The potential vehicles are 'car', shown in italics.

(106) I bought a *car*

(107) I washed a *car*

These two examples seem to both be literal expressions, but there are some differences between the two. When a car is observed, it is understood to consist of several elements, including the car body, car functions, windows, a driver, wheels and so forth. Based on intuition, the lexical concept of 'car' in example (106) refers to the whole element of the car, including the physical aspects and car functions, since the verb 'buy' is embodied in the sentence. The meaning of 'to buy' here is to obtain the whole object of the car, including the physical aspect and its functions for driving. Therefore, the lexical concept of 'car' accounts for the whole (or most of) its conception. As a result, this sentence is definitely a literal expression. In example (107), however, the lexical concept of 'car' is only the outside of the car, since the verb 'to wash' means to clean with water and soap. Individuals rarely use the verb 'to wash' for the inside of the car. That is to say, the word 'car' in example (107) refers to a part of the car, or, in other words, example (107) uses the metonymic cognitive structure WHOLE FOR A PART. In light of this difference, this thesis focusses on the border between literal and metonymic expressions.

Another issue is the difference among metonymic expressions. The following examples are often discussed in context of whether they are literal or metonymic expressions, even though both linguistic vehicles access one aspect of their concept. The existing metonymic theories

have still not solved the problem of identifying primary and secondary entities within a single domain. Consider the following examples:

(33) This *book* is very large (Barcelona 2011)

(34) This *book* is a history of Iraq (Croft 1993)

Both examples (33) and (34) are about a book, but the concept symbolised by the book is different. Example (33) refers to the size of the book, while example (34) refers to the content of the book. 'Book' consists of many elements such as material, size, weight, colour, content, author, publisher and so forth. According to Lakoff and Johnson's (1980) traditional account, if the book, the source, refers to a primary entity, the target, it is a literal expression; if the source refers to a secondary entity, it is a metonymic expression. However, the methodology of identifying the distinction between primary and secondary entities still remains ambiguous.

Croft (1993) claims that examples (33) and (34) are literal rather than metonymic. He proposes that metonymy uses the domain-highlighting operation. It consists of mentally activating a 'secondary' (sub)domain (a target) through a primary (sub)domain (a source), both within the same 'domain matrix'. There are intrinsic and extrinsic entities in the domain matrix. The intrinsic entities are the central concepts, while the extrinsic entities are non-central concepts. The physical aspect of the book, 'very large', and the abstract (functional) aspect, 'history of Iraq', profiled in each domain are highly intrinsic; no reference is made to external entities. Therefore, Croft concludes that both sentences are literal rather than metonymic.

Ruiz de Mendoza (2000) insists that example (34), 'The book is a history of Iraq', is categorised as a metonymy but that example (33), 'The book is very large', is a literal expression. The physical aspect, 'very large', is a fairly central feature of the book, and it is a primary rather than a secondary entity; that is, this is not a metonymy. On the other hand, the content of the book, 'history of Iraq', is a more peripheral feature, which shows us that it is a metonymy. The content of a book does not always have to include accounts of Iraq's history, which would be an area of content too specific for this concept of centrality. Following his idea, the abstract (functional) aspect of a book is not a primary entity, and, therefore, example (34) is metonymic.

Barcelona (2011) claims that both examples (34), 'The book is a history of Iraq', and (33), 'The book is very large', are allocated as metonymy, but example (33) is a peripheral

metonymic expression. He agrees with Ruiz de Mendoza's opinion that the physical aspect belongs to a primary rather than a secondary domain, and the abstract (functional) aspect of the book is the secondary domain in the book domain matrix. But contrary to Ruiz de Mendoza, he insists that secondariness is not an essential condition for metonymicity. According to Barcelona, the metonymicity should be represented by the operation of mapping (or activation). In these examples, the source domain of 'book' is mapped onto a subdomain in the matrix of 'physical aspect' or 'abstract (functional) aspect', respectively, and, as a result, both subdomains are mentally activated via the source. Operations such as mapping or activation are an essential property of conceptual metonymy. Therefore, both examples are categorised as metonymy even though they refer to different entities, primary and secondary.

Considering the different ideas of understanding primary and secondary concepts in more detail, the words 'very large' represent the physical aspect, while 'a history of Iraq' represents the abstract (functional) aspect. Metonymy can consist of a secondary concept as well as a primary concept. In these terms, the thesis supports Barcelona's opinion that both examples are metonymic. However, following the LCCM theory in this thesis, both physical aspects and abstract (functional) aspects can be used in a primary cognitive model because both are essential materials, and the model cannot be complete without each concept. For more detail, see the analysis section.

Another issue is whether metonymic operation occurs in a single domain. In general, metonymic operation occurs in a single domain, and metaphorical operation occurs in two distinct domains. Prototypical expressions can be applied to this principle, but some expressions cannot be applied. Consider the following example:

(98) The *ham sandwich* has asked for the bill (Evans 2009a [Lakoff & Johnson 1980])

This is a metonymic example in which 'ham sandwich' refers to a customer in a restaurant. However, 'ham sandwich' and 'customer' are allocated to completely different taxonomic domains because 'ham sandwich' is a food and 'customer' is a human being. Therefore, this example is close to metaphor, but we still see it as metonymy. It is necessary to consider how we account for this kind of example as a metonymy.

I hypothesise that these different types of metonymic expressions can be divided into several conceptual levels: non-figurative, figurative and higher figurative metonymic

expressions. Non-figurative metonymic expressions include a metonymic cognitive structure where one entity refers to another entity in a single cognitive model, but they do not have any figurativity. Figurative metonymic expressions include a metonymic cognitive structure and figurativity that is far from an original meaning. Higher figurative metonymic expressions include a metonymic cognitive structure and figurativity that is higher than in figurative metonymies. Additionally, there is another type of metonymic expression called a conventionalised metonymic expression. Metonymic expressions generally possess figurativity, but they are conventionalised by repeated use. As a result, the metonymic expressions are conventionalised and stored in our minds as a conception. I explain these types of expressions in a later section.

4.3 Analysis

This section analyses a range of metonymic expressions by applying the LCCM theory to the access route length between vehicle and target. The notion of figurativity corresponds to the level of figurativity, which can be one of the motivations of metonymic expressions. To understand metonymic expressions more precisely, I also consider literal expressions.

4.3.1 Literal Expression

As is widely known, literal meaning refers to the most basic sense in a word, which is defined as an original or central meaning. According to the LCCM theory, if a vehicle accesses a primary cognitive entity, the vehicle has a literal meaning, and if a vehicle accesses a secondary entity, the vehicle has a figurative meaning. However, when examined in more detail, literal expressions can have slightly different forms. Consider the following examples:

(106) I bought[5] a *car*

(108) I borrowed[6] a *book*

[5] This is based on the default consequence that buying a car necessarily implies using it.
[6] This is also based on the common consequence that borrowing a book necessarily implies reading it.

Example (106), ‘I bought a car’, is a literal expression. The pronoun ‘I’ is lexically an animate entity and the first person, which belongs to a closed lexical concept. The word ‘bought’ is the past tense of ‘buy’, which is the resultative form of the fact of possession, and it belongs to an open lexical concept. A word ‘buy’ here means that buying a car necessarily implies using it. The word ‘a’ is an indefinite article and is not lexically specified as a noun(s); in other words, it is a closed concept. The word ‘car’ is a noun and open lexical concept, and it is a controversial lexical concept in this context. The lexical concept of [CAR] arises from non-linguistics knowledge including PHYSICAL ASPECTS such as WHEELS, SEATS, WINDOWS, DRIVER and PASSENGER and ABSTRACT (FUNCTIONAL) ASPECTS such as DRIVING, TO CARRY A SMALL NUMBER OF PEOPLE, BRAKE, GO FORWARD and so forth. PHYSICAL ASPECTS and ABSTRACT (FUNCTIONAL) ASPECTS are primary entities; this is called the primary cognitive model in the LCCM theory. This knowledge is about the basic features of a thing (e.g., car, book) since most of the thing consists of physical and abstract (functional) aspects. This primary knowledge should be common and well established among other members of a speech community. Other entities, such as WHEELS, SEATS, WINDOWS, DRIVER, PASSENGER, DRIVING, TO CARRY A SMALL NUMBER OF PEOPLE, BRAKE and GO FORWARD, are subclasses of the primary cognitive model called attributes. These are subclasses of a primary cognitive model that represent one aspect of it.

Consider example (106), ‘I bought a *car*’. It seems that the lexical concept [CAR] in this sentence accesses both primary cognitive models, PHYSICAL ASPECTS and ABSTRACT (FUNCTIONAL) ASPECTS. This is because the word ‘car’ can have several potential cognitive models such as physical aspects (doors, windows, seats and so forth) and abstract (functional) aspects (to drive and carry a small number of people). The word ‘buy’ means ‘to obtain something by paying money’. In this context, ‘buy a car’ means ‘to obtain’ physical aspects (doors, windows, seats and so forth) and abstract (functional) aspects (to drive and lift a small number of people) of the car. As a result, the lexical concept of [CAR] successfully matches both primary cognitive models, PHYSICAL STRUCTURES and ABSTRACT (FUNCTIONAL) ASPECTS. In the interpretation process, the lexical concept [CAR] can simultaneously access and activate both cognitive models.

In more detail, Figures 4.1 and 4.2 show that the lexical concept [BUY] accesses and activates a primary cognitive model, TO OBTAIN SOMETHING BY PAYING MONEY. On the one hand, the concept [CAR] accesses and activates the primary cognitive models PHYSICAL

STRUCTURES and ABSTRACT (FUNCTIONAL) ASPECTS in this context. The accessed cognitive models, such as TO OBTAIN SOMETHING BY PAYING MONEY, PHYSICAL STRUCTURES and ABSTRACT (FUNCTIONAL) ASPECTS, associate with each other and become an informational characterisation: AN ANIMATE ENTITY OBTAINS A CAR (INCLUDING PHYSICAL AND ABSTRACT [FUNCTIONAL] ASPECTS) BY PAYING MONEY. This is the meaning of the sentence. These cognitive models can share schematic coherence in terms of conceptual content. This is subject to the Principle of Conceptual Coherence, which states that 'matching occurs between one or more cognitive models/informational characterisations, belonging to distinct cognitive model profiles/lexical conceptual units, which share schematic coherence in terms of conceptual content' (Evans 2009a: 258). This matching process intends to achieve a greater schematic salience in this context. This is based on the Principle of Schematic Salience in matching, which states that 'matching across cognitive model profiles/informational characterisations achieves greater schematic salience when relatively more cognitive models are matched than matches involving fewer cognitive models' (Evans 2009a:261).

Therefore, the vehicle [CAR] and its targets (PHYSICAL AND ABSTRACT [FUNCTIONAL] ASPECTS) overlap, and the vehicle [CAR] refers to entire (or more than one) primary cognitive models. Therefore, the vehicle of 'car' refers to the 'whole car', including all the physical structures and the abstract (functional) aspects of the car. In other words, it can be said that the lexical concept [CAR] uses the conceptual relationship WHOLE FOR THE WHOLE.

According to Dirven (1993), example (109), 'car in a garage', is a literal expression since 'the area of literalness, exemplified by example (109) 'car in a garage' is matched by a large area of non-literalness' (Dirven 2002:107). It is true that the expression is literal, but this is closed to modulation in my understanding, although Dirven does not claim that 'car' refers to both physical and abstract aspects, but the 'car' refers to 'car itself'. It seems that the 'car' in the expression 'car in a garage' highlights the physical aspect rather than the abstract aspect because this expression emphasises the place where the car is; the expression does not imply an abstract (functional) aspect of the car. Therefore, compared to the expression 'I bought a car' (a person buys not only the car body but also the driving function), the example 'car in a garage' can be identified as highlighting a physical aspect.

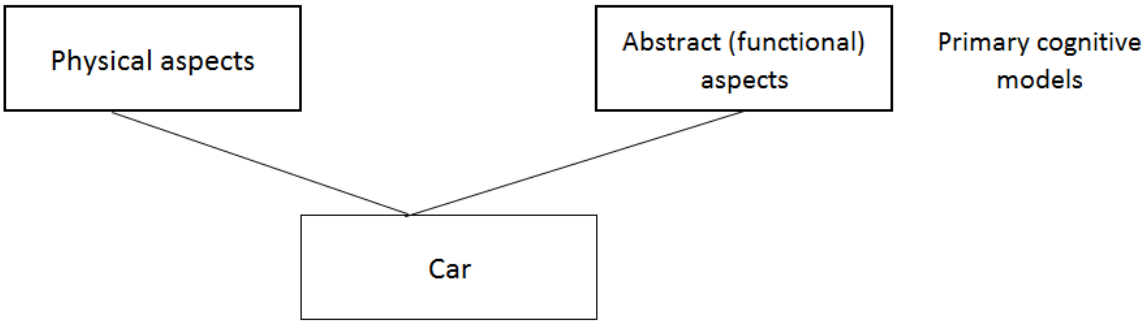


Figure 4.1 Partial cognitive model profile[7] for [CAR]

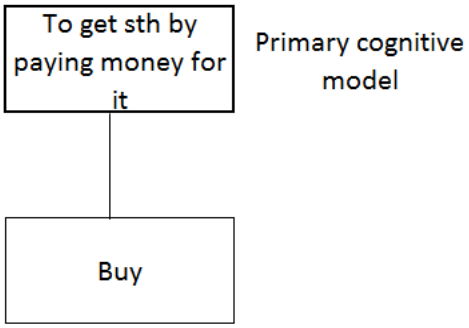


Figure 4.2 Partial cognitive model profile for [BUY]

Example (108), 'I borrowed a book', is also a literal expression in the same way as example (106). The word 'I' is a pronoun (the first person) and an animate entity, which is a closed lexical concept. The word 'borrowed' is the past tense of 'borrow', which is a resultative action, and it is an open lexical concept. I refer to 'borrowed' here based on the fact that the common consequence of borrowing a book necessarily implies reading it. The word 'a' is an indefinite article and is a closed lexical concept. The word 'book' is a noun and open lexical concept, which is a controversial lexical concept in this context. Through the *integration* process, the open lexical concepts [BOOK] and [BORROWED] integrate with each other and become lexically specified. They then undergo other *integration* with closed lexical concepts, [A] and [I], which become a lexical conceptual unit.

[7] From this chapter forward, a number of figures will be shown. Almost all figures are made by the author except where references are given to previous LCCM work.

Once the lexical conceptual unit is established, each open lexical concept accesses its cognitive model. This is demonstrated in Figures 4.3 and 4.4. The lexical concept [BORROW] includes cognitive models such as TO TAKE AND USE SOMETHING FROM SOMEBODY WITH THE INTENTION OF RETURNING IT, TO LEND, and TO ADOPT (IDEAS, WORDS) FROM ANOTHER SOURCE, and accesses TAKE AND USE SOMETHING FROM SOMEBODY WITH THE INTENTION OF RETURNING IT. On the one hand, the lexical concept of [BOOK] includes the lexical profiles of PHYSICAL ASPECTS, including the attributes SIZE, WEIGHT, COLOUR and other cognitive models, and ABSTRACT (FUNCTIONAL) ASPECTS, including CONTENT, AUTHOR, PUBLISHING COMPANY and so forth. The lexical concept of [BOOK] simultaneously accesses the two cognitive models PHYSICAL ASPECTS and ABSTRACT (FUNCTIONAL) ASPECTS. Accessed cognitive models such as TO TAKE AND USE SOMETHING FROM SOMEBODY WITH THE INTENTION OF RETURNING IT, PHYSICAL ASPECTS and ABSTRACT (FUNCTIONAL) ASPECTS match with each other and set up an informational characterisation: AN ANIMATE ENTITY PHYSICALLY OBTAINS A BOOK THAT BELONGS TO SOMEBODY, READS THROUGH IT AND RETURNS IT TO HIM/HER. This is the sentence's meaning.

In the semantic construction, the animate entity borrowed a book, which seems to refer to a physical aspect, but it implies that the person who is borrowing obtains a book, will read the book and then return it. As long as we detect this chain, the lexical concept [BOOK] in this context can simultaneously access both the cognitive models PHYSICAL ASPECTS and ABSTRACT (FUNCTIONAL) ASPECTS.

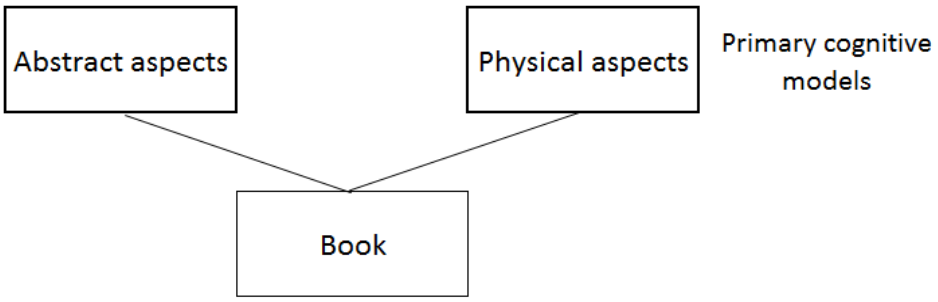


Figure 4.3 Partial cognitive model profile for [BOOK]

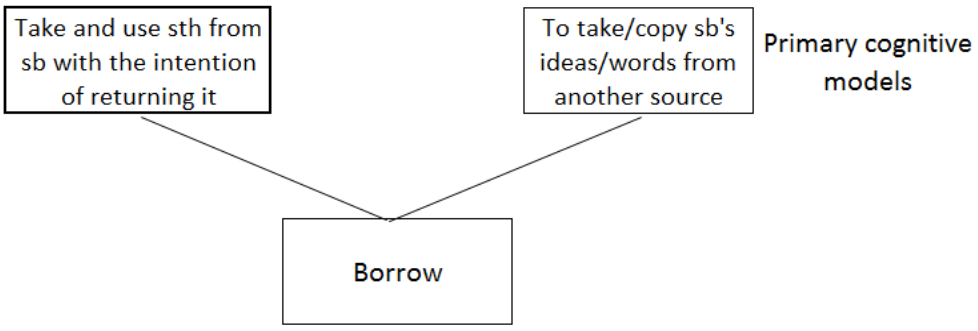


Figure 4.4 Partial cognitive model profile for [BORROW]

Therefore, examples (106) and (108) are slightly different types of literal expressions observed in finer distinction. The lexical concepts [BOOK] and [CAR] possibly access more than one cognitive model such as PHYSICAL ASPECTS and ABSTRACT (FUNCTIONAL) ASPECTS. Both words are the object in their sentence and are influenced by verb meaning. The verbs 'buy' and 'borrow' are the resultative forms of the fact of possession that can include a continuous motion from start to finish. During that movement, the objects, book and car, can be highlighted in several aspects. A thing (physical body) normally includes at least physical and semantic aspects, which belong to the primary cognitive model. For example, a book is made from paper and is for reading, and a car is made from metal and tyres and is for driving. In some cases, as can be seen in examples (106) and (108), both physical and abstract aspects can be mentioned in a sentence. This case is more likely to be literal than accessing only one cognitive model, and the intended meaning of a given lexical concept covers most of the primary cognitive area. I refer to this as A WHOLE FOR WHOLE conceptual relationship.

To support this type of literal expression, let us consider the following examples:

(110) John understood the book

In example (110), the lexical concept of 'book' refers to one aspect, the content of the book. On the other and, in example (108), 'I borrowed a book', as shown above, the lexical concept of 'book' refers to the whole book in that context. Example (110) has three open lexical concepts, 'John', 'understood' and 'book', and one closed lexical concept, 'the'. Since open lexical concepts have conceptually rich content, they have cognitive models. See the figures below. The name John is a common name for English people. It might be used for pets (e.g.

dogs), but, in this context, John is understood to be a person (man) based on the connection with other open lexical concepts. The lexical concept of 'understand' is a verb that means to grasp ideas or comprehend the content of the book in this context. The lexical concept 'the' is a determinative and determines the book. The lexical concept [BOOK] refers to the content of the book, since the thing that is understood is only the content of the book. Therefore, in this case, as opposed to in example (108), 'book' refers to only the content (of the book). This can be called A WHOLE FOR THE PART relationship. In this case, although this is a literal expression because all lexical concepts reach the primary cognitive level, it is not included in the literal type discussed above.

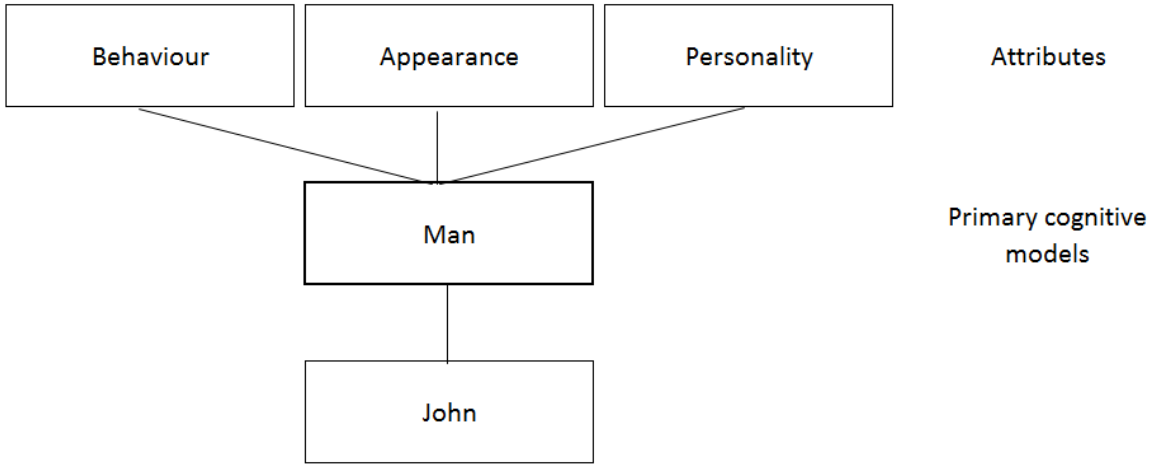


Figure 4.5 Partial cognitive model profile for [JOHN]

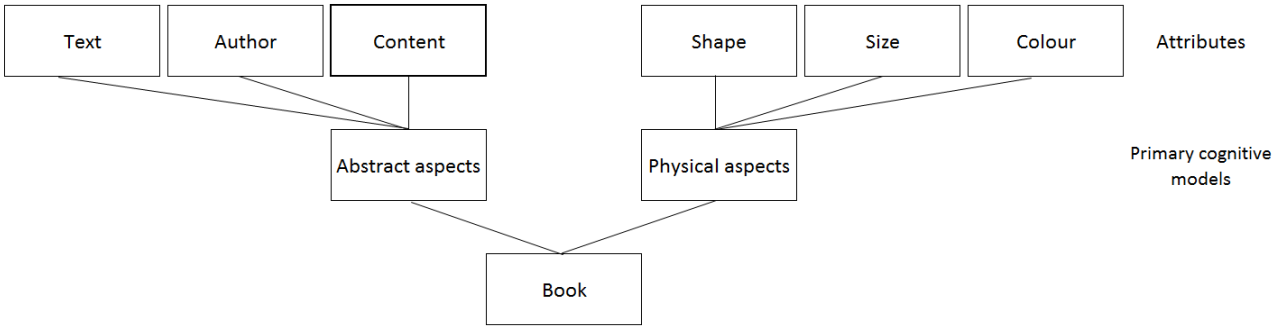


Figure 4.6 Partial cognitive model profile for [BOOK]

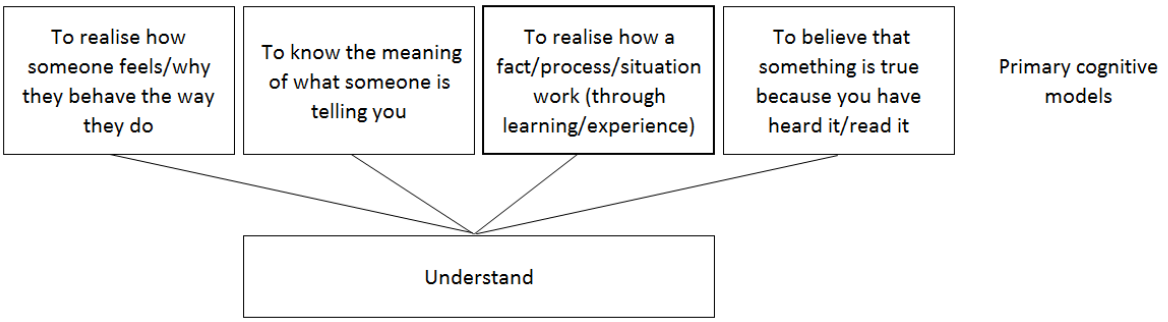


Figure 4.7 Partial cognitive model profile for [UNDERSTAND]

Another example is (111), 'I drive a car'. Compare this to example (106), 'I bought a car'. Example (111) is more focussed on a functional aspect of a car: 'driving'. For example, someone starts a car engine and moves to the destination. The example does not imply the physical aspects of the car, such as the door, seats and windows. Therefore, this example could be A WHOLE FOR THE PART relationship (for more detail, see the next section). Consider other examples below:

(112) I have a *cat* (as a pet)

(113) I have a *cat* (holding)

Example (112), 'I have a cat (as a pet)', can be identified as an example of THE WHOLE FOR WHOLE relationship. Here, 'have' and 'cat' are open lexical concepts. The lexical concept [HAVE] has several meanings such as WHAT SOMEONE OR SOMETHING LOOKS LIKE, WHAT QUALITIES OR FEATURES THEY POSSESS, TO INCLUDE OR CONTAIN SOMETHING, SOMEONE OWNS SOMETHING, TO BE HOLDING SOMETHING OR CARRYING IT WITH YOU and so forth. In this context, [HAVE] refers to SOMEONE OWNS SOMETHING. Since 'have a cat' means to feed the cat, toilet-train it, play with it, wash its fur and so forth, the agent 'I' touches the cat's fur and tail and knows its personality. Altogether, the sentence includes all aspects (at least more than one) of the cat. Therefore, it can be said that the lexical concept 'cat' here includes both physical aspects (e.g., body parts) and abstract aspects (e.g., personality, behaviour).

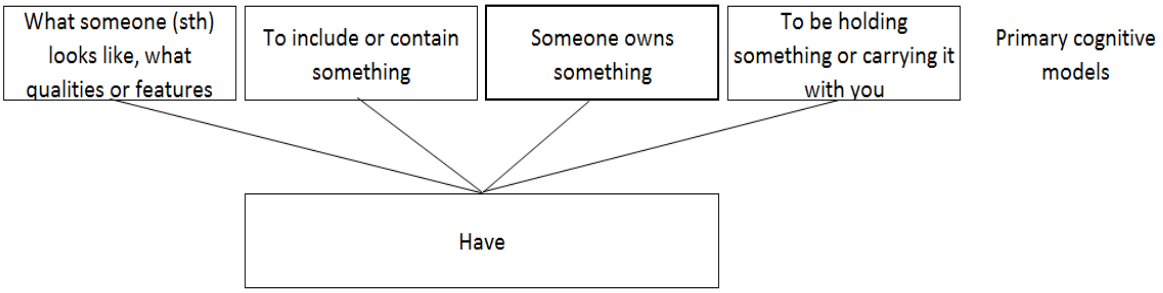


Figure 4.8 Partial cognitive model profile for [HAVE]

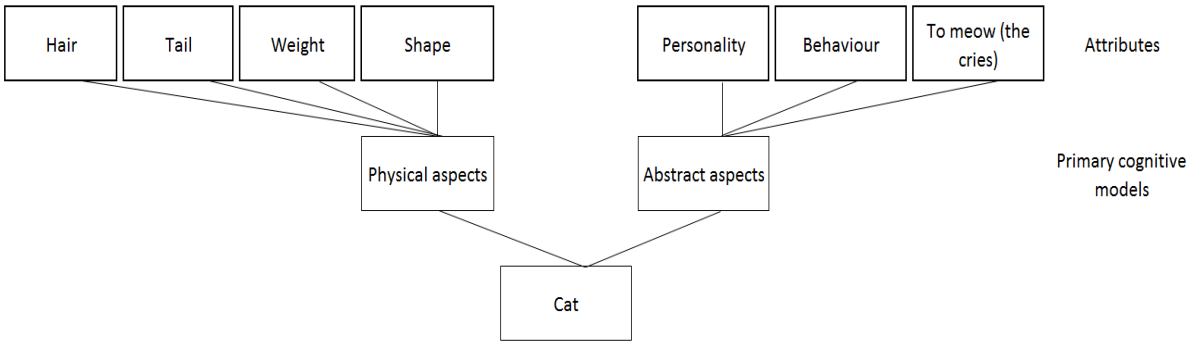


Figure 4.9 Partial cognitive model profile for [CAT]

On the other hand, example (113), 'I have a cat (holding)', uses 'cat', but it has a slightly different meaning. The lexical concept 'have' here means 'to be holding something or carrying it with you'. This sentence highlights more of the PHYSICAL ASPECTS such as fur, shape and weight, not the personality or behaviour of the cat. In this respect, it can be said that this sentence refers to a part, or aspects, of the cat, namely physical aspects.

(114) I live in this *house*

(115) My *house* is small

The next example is ‘I live in this house’. I assume that this is also A WHOLE FOR WHOLE example. All lexical concepts are integrated, and, as a result, the sentence means that AN ANIMATE ENTITY IS LIVING IN THIS HOUSE. For example, a house consists of walls, a roof, windows and so forth. The agent ‘I’ passes through the front door and goes up and down the stairs, cooks some meals in the kitchen, takes a bath and so forth. That is, this phrase seems to refer to both the PHYSICAL ASPECTS and ABSTRACT (FUNCTIONAL) ASPECTS of the house.

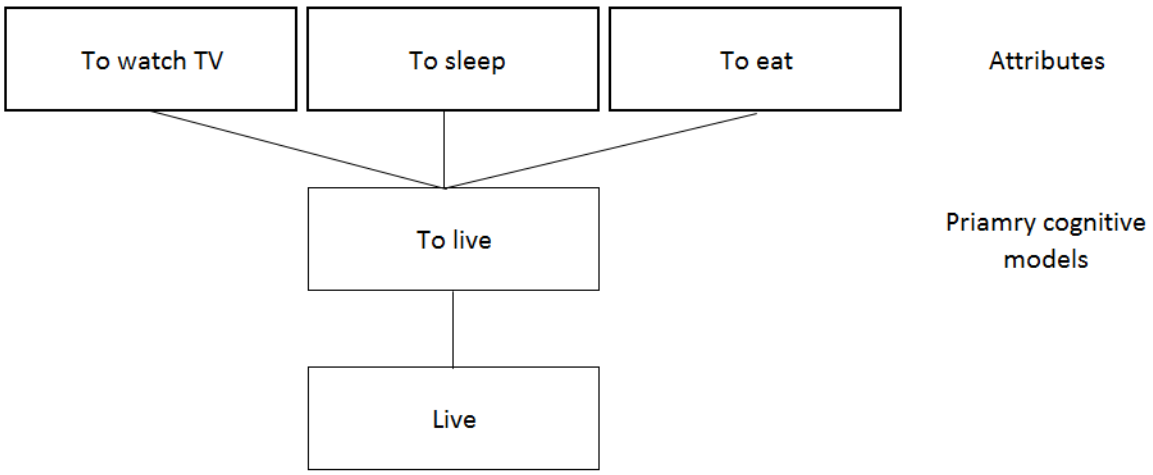


Figure 4.10 Partial cognitive model profile for [LIVE]

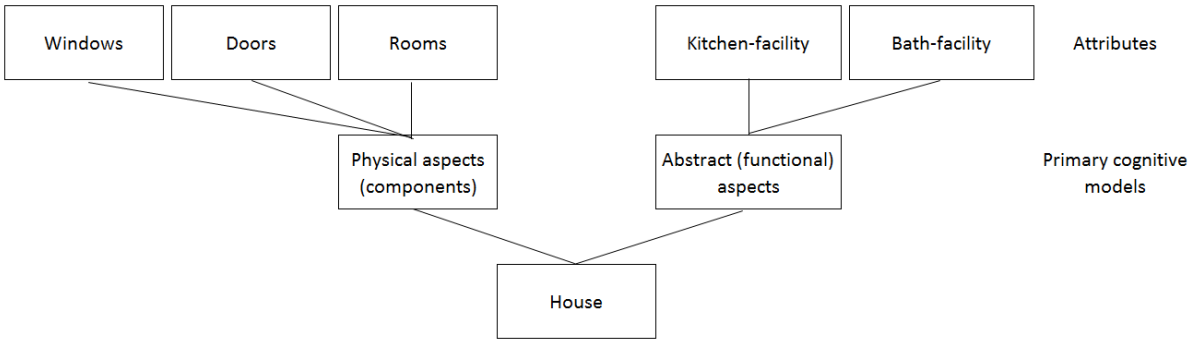


Figure 4.11 Partial cognitive model profile for [HOUSE]

On the other hand, example (115), 'My house is small', refers to the particular size of the house. The size is a physical aspect of the house, and, therefore, the sentence does not imply other aspects of the house. This is A WHOLE FOR THE PART relationship.

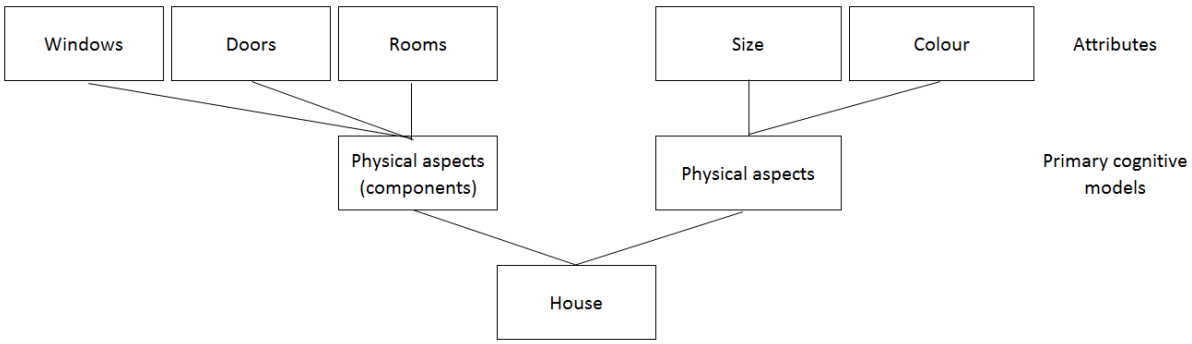


Figure 4.12 Partial cognitive model profile for [HOUSE]

4.3.1.1 Summary of Semantic Construction of Literal Expressions

Examples (106) and (108) are literal expressions observed in finer distinction. The lexical concepts [BOOK] and [CAR] possibly access more than one cognitive model; that is, they implicitly mention PHYSICAL AND ABSTRACT ASPECTS. Both words are the object in their sentence and are influenced by verb meaning. The verbs 'buy' and 'borrow' are the resultative forms of the fact of possession that can include a continuous motion from start to finish. During that movement, the objects, book and car, can be highlighted in several aspects. A thing (physical body) normally includes at least physical and semantic aspects, which belong to the primary cognitive model. For example, a book is made from paper and is for reading, and a car is made from metal and tyres and is for driving. In some cases, as can be seen in examples (106) and (108), both physical and semantic aspects can be mentioned in a sentence. Both cases in (106) and (108) are more likely to be literal than to access only one cognitive model, and the intended meaning of a given lexical concept covers most of the primary cognitive area. I refer to this as A WHOLE FOR WHOLE conceptual relationship.

Therefore, the literal expressions mentioned above have not been applied to the LCCM theory. Evans (2015) claims that, in a case where the lexical concept accesses the primary

cognitive model, which refers to the original or main meaning of the lexical concept, more than one cognitive model cannot be accessed in the same cognitive model profile. In a broad sense, those expressions can be referred to as literal expressions. However, when looked at more precisely, those expressions include a metonymic cognitive structure of the PART FOR THE WHOLE/WHOLE FOR A PART conceptual relationship. If a lexical concept includes several primary cognitive models and matches one of them, this should include THE WHOLE FOR A PART conceptual relationship, which can be governed by metonymic principles. In this thesis, I refer to this as a non-figurative metonymy, which is discussed in the following section. Examples (106) and (108) are a different case, which have A WHOLE FOR THE WHOLE conceptual relationship. The vehicle accesses entire (more than one) primary cognitive models, as seen in Figure 4.5 below. The two examples are more likely to be literal expressions than non-figurative metonymies, where a lexical concept accesses one primary cognitive model. In this thesis, I distinguish THE WHOLE FOR THE WHOLE conceptual relationship from THE WHOLE FOR A PART/PART FOR THE WHOLE conceptual relationship. If a vehicle accesses an entire primary cognitive model (at least more than one), the expression can have more literalness, while if a vehicle accesses only one primary cognitive model, the expression can be identified as a non-figurative metonymy.

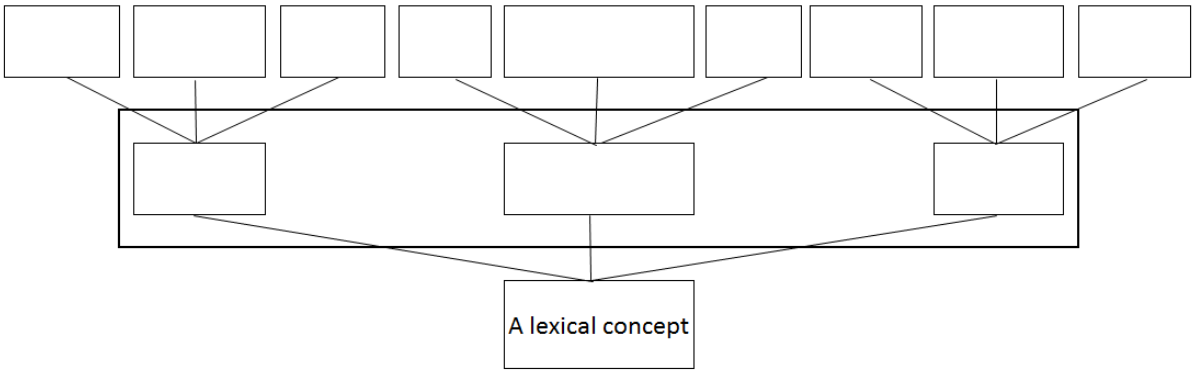


Figure 4.13 Complex relationship between a lexical concept and encyclopaedic knowledge

Because all lexical concepts in literal expressions provide access to a primary cognitive level, each of the lexical concepts in a sentence holds a primary meaning and consists of literalness from primary meanings. The construction of literalness depends to some extent on the non-linguistic features such as the topic of the context, the speaker's communicative intention, the listener's assumptions and so forth. This is because literal expressions can be seen

as links to concrete meanings, and they do not access a peripheral meaning (secondary cognitive model) or generate new meanings like figurative expressions do. Therefore, literalness tends to establish its sentence-level meaning without non-linguistic information. In other words, literalness seems to hold more of a context-independent aspect compared to figurative expressions. In addition, literalness is subject to 'lexical concept selection' rather than other operations in the LCCM framework. Unlike figurative expressions, lexical concepts in literal expressions are not often affected by other lexical concepts. Once lexical concepts undergo 'lexical concept selection', they successfully access their targets. Therefore, it can be said that 'lexical concept selection' guides the direction of targets. That is to say, compared to figurative expressions, literal expressions tend to be context-independent and subject to the 'lexical concept selection' operation.

4.3.2 Non-Figurative Metonymic Expressions

This section considers metonymic structure, THE WHOLE FOR THE PART (A PART FOR THE WHOLE) relationship and the level of figurativity. As mentioned above, non-figurative expressions involve metonymic cognitive structures but do not include figurativity. In previous accounts of metonymy, some researchers have also divided literal and metonymic expressions and shown that there are several types of expressions. For example, as mentioned in Chapter 3, Dirven (1993) claims that there is a category called pre-metonymy, divided into contextual modulation and frame variation, located between literal and metonymic expressions. In the same way, Radden (2002) describes partial metonymy, which does not involve a fully literal meaning but has more figurative meaning than literal expressions. This section considers these kinds of expressions as applied to the LCCM framework. This thesis also inheres their notions. In this thesis, the non-figurative metonymic expression is literal since a non-figurative metonymic vehicle facilitates access to one of the primary cognitive models (target) or to attributes in primary cognitive models but also includes metonymic cognitive structures. Consider the following examples in terms of non-figurative metonymic features:

(107) I washed a *car* [EXTERIOR]

(116) I vacuum a *car* [INTERIOR]

(117) I fill a *car* [FUEL TANK]

I washed a car

The word ‘car’ in example (107), ‘I washed a car’, refers to the outside of a car. The word ‘I’ is a pronoun (the first person) and an animate entity, which is a closed lexical concept. The word ‘washed’ is the past tense of ‘wash’, which is an open lexical concept. The word ‘a’ is an indefinite article, which is a closed concept. The word ‘car’ is a noun, an open lexical concept and a metonymic lexical concept. Within the *lexical concept integration*, the open lexical concepts [WASH] and [CAR] are lexically specified and then integrate with the other closed lexical concepts, [I] and [A]. All lexical concepts become a lexical conceptual unit.

In the next operation, look at the following figures; both open lexical concepts, [WASH] and [CAR], undergo the operation of *interpretation*. The open lexical concept [WASH] accesses the primary cognitive model TO CLEAN SOMETHING USING WATER (AND SOAP) while the lexical concept [CAR] accesses the primary cognitive model PHYSICAL ATTRIBUTES and then highlights the attribute EXTERIOR. Both accessed targets match with each other and then become a sentence-level informational characterisation; the meaning of the sentence is AN ANIMATE ENTITY CLEANS THE OUTSIDE OF THE CAR USING WATER.

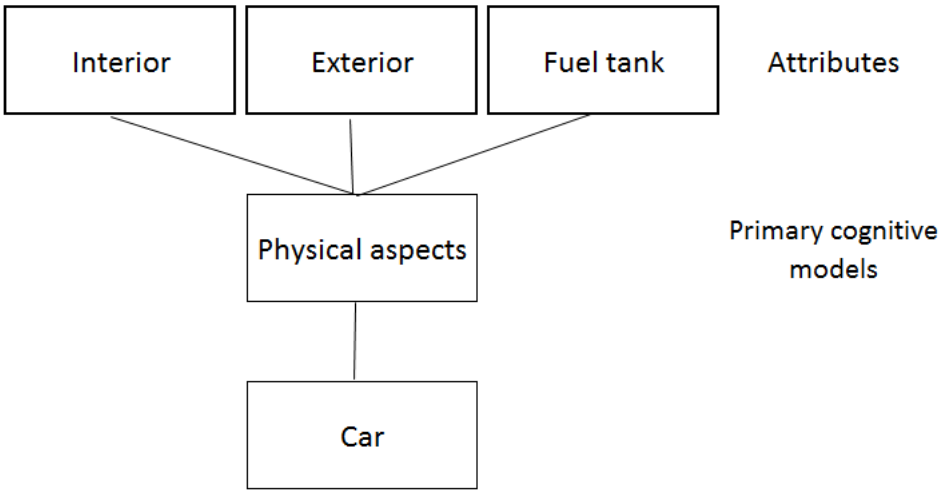


Figure 4.14 Partial cognitive model profile for [CAR]

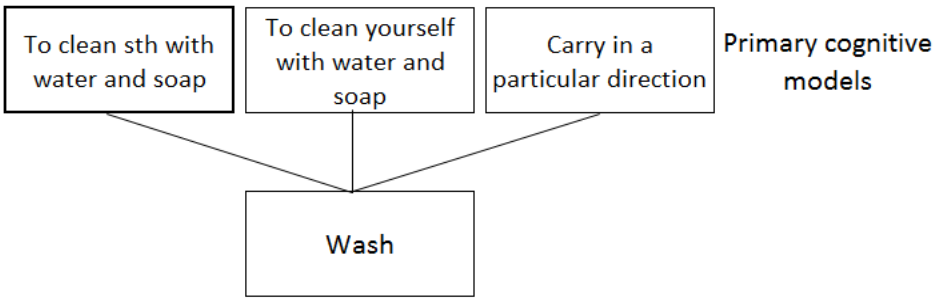


Figure 4.15 Partial cognitive model profile for [WASH]

I vacuum a car

The word 'car' in example (116), 'I vacuum a car', refers to the inside of a car. The lexical concepts [CAR] and [VACUUM] are open lexical concepts, while lexical concepts [I] and [A] are closed. At first, the open lexical concepts are lexically specified and then becomes closed lexical concepts. All closed lexical concepts, [I], [A], [VACUUM] and [CAR], then integrate with each other, unpacking each linguistic content and becoming one lexical conceptual unit. Within the operation of interpretation, each open lexical concept accesses its cognitive models to fill a semantic gap. In the context of [CAR], there is only one internal lexical concept, which accesses the attribute INTERIOR in the primary cognitive model PHYSICAL ATTRIBUTES. The lexical concept [VACUUM] has only one primary cognitive model, TO CLEAN WITH A VACUUM CLEANER, and has no other meanings; it is directly accessed by its lexical concept. Likewise, another closed lexical concept has only one primary cognitive model, which is directly accessed by its lexical concept. All accessed targets match with each other and become a sentence-level informational characterisation; the meaning of this sentence is AN ANIMATE ENTITY VACUUMS THE INSIDE OF THE CAR.

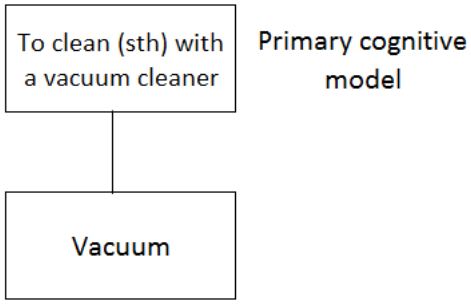


Figure 4.16 Partial cognitive model profile for [VACUUM]

I fill a car

Example (117), 'I fill a car', means 'I fill up a car with fuel' and does not mean 'I fill the inside of a car with something'. The word 'I' is a pronoun (the first person) and an animate entity, which is an internally closed lexical concept. The word 'fill' is a verb and shows some activity, and it is an internally open lexical concept. The word 'a' is an indefinite article and internally closed lexical concept. The word 'car' is a noun, an internally open lexical concept and a metonymic lexical concept in this sentence.

Through the *lexical concept integration* in the LCCM operation, the internally open lexical concepts of [CAR] and [FILL] are integrated and become lexically specified; in other words, both open lexical concepts become closed lexical concepts. This is called *internal lexical concept integration*. In the next step, *external lexical concept integration* occurs, which includes the closed lexical concepts [A] and [I] and also [CAR] and [FILL], which were originally internally open lexical concepts. In this operation, all lexical concepts unpack their linguistic content and set up the formation of a lexical conceptual unit.

Once the lexical concept unit is established, each open lexical concept accesses and activates its cognitive model, which is called matching. The figures below show the open lexical concepts [FILL] and [CAR].

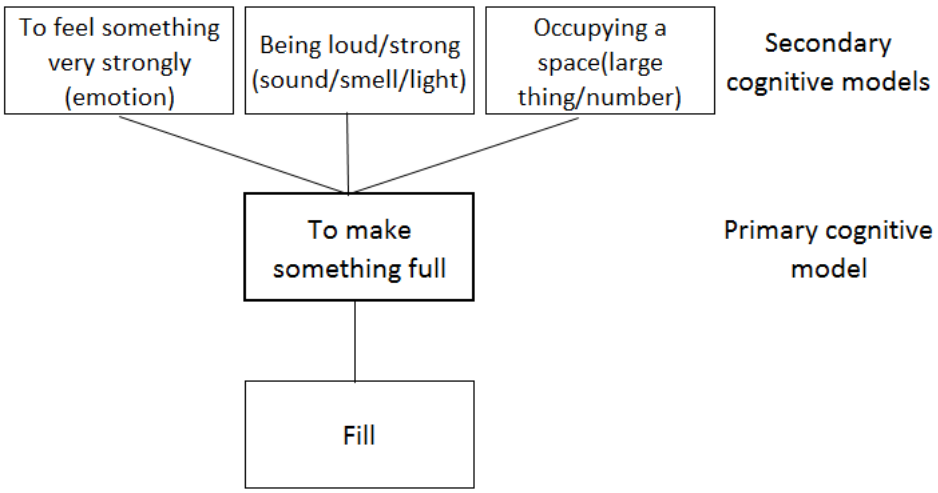


Figure 4.17 Partial cognitive model profile for [FILL]

The lexical concept [FILL] is an internally open lexical concept in this context and includes several cognitive models such as TO MAKE SOMETHING FULL, TO BE VERY LOUD/STRONG, TO FEEL SOMETHING VERY STRONGLY and so forth. In this context, the primary cognitive model TO MAKE SOMETHING FULL is an accessed target. On the one hand, the lexical concept of [CAR] includes the cognitive models of PHYSICAL ATTRIBUTES, including INTERNAL, EXTERNAL and FUEL TANK, and ABSTRACT (FUNCTIONAL) ASPECTS, including TO DRIVE and TO CARRY A SMALL NUMBER OF PEOPLE. As a result of the integration process, the lexical concept [CAR] accesses the primary cognitive model [PHYSICAL ATTRIBUTES] and then highlights the attribute FUEL TANK. Both accessed targets match with each other and become a sentence-level informational characterisation: AN ANIMATE ENTITY FILLS UP A CAR WITH PETROL. This is the meaning of the sentence.

Look at Figure 4.13. The metonymic vehicle [CAR] in example (107) facilitates access to the attribute EXTERIOR; the metonymic vehicle in example (116) accesses INTERIOR; and the vehicle in example (117) accesses FUEL TANK. More specifically, the lexical concept of [CAR] accesses the primary cognitive model PHYSICAL ASPECT and then highlights the attributes INTERIOR, EXTERIOR and FUEL TANK, respectively. As opposed to literal expressions that have WHOLE FOR THE WHOLE relationships, these three examples mention certain aspects of a primary cognitive model. In other words, there is some conceptual distance between the two entities of metonymic vehicle and target. Despite this, these three examples still have a metonymic cognitive structure, A WHOLE FOR A PART relationship between the vehicles and targets. The lexical concept [CAR] accesses and activates attributes that are more than the primary cognitive level and less than the secondary cognitive model. Therefore, these examples can be non-literal but non-figurative expressions and still hold a metonymic cognitive structure. I define these three examples as non-figurative metonymic expressions[8].

[8] The three examples might be identified in different ways on different occasions, but, in the thesis, I consider the three examples in the common and general occasion. The important thing is that these kinds of expressions involve metonymic cognitive structure but are located in literal expressions.

4.3.2.1 Physical vs. Abstract Aspects

The next examples are more controversial expressions, as mentioned above, when it comes to identifying literal and metonymic expressions. Consider the following examples[9]:

(33) The *book* is very large [SIZE] (Barcelona 2011)

(34) The *book* is a history of Iraq [CONTENT] (Croft 1993)

Both examples (33) and (34) concern a book, mentioning its 'size' and 'content', respectively. The term 'the book' consists of many elements such as 'materials', 'size', 'weight', 'colour', 'content', 'author', 'publisher' and so forth. I hypothesise that both examples can be categorised as non-figurative metonymy. Although it is often debated which entity, physical or abstract, has the most central meaning to a given lexical concept, this thesis takes the position that both entities can be one of the primary cognitive models. Consider both examples.

The book is very large

Example (33), 'The book is very large', describes the size of the book. The word 'the' is a definite article and a closed lexical concept. The word 'book' is a noun and an open lexical concept. The word 'is' is a being verb and a closed lexical concept. The word 'very' is an adverb and a closed lexical concept. The word 'large' is an adjective and an open lexical concept. Through the integration process, each open lexical concept integrates with the others, becomes a lexical conceptual unit and then integrates with the closed lexical concepts and the lexical concepts that were originally open to become a larger lexical conceptual unit. In the *interpretation* process, open lexical concepts match with each other. The following figures show this process for [BOOK] and [LARGE]. The lexical concept [BOOK] accesses the attribute [SIZE] in the primary cognitive model PHYSICAL ATTRIBUTES, while the lexical concept [LARGE] accesses the primary cognitive model BIG IN SIZE/AMOUNT/NUMBER, and they match with each other. The matching occurs at the primary cognitive level. That is, the book has a metonymic cognitive structure in THE WHOLE FOR A PART conceptual relationship.

[9] Note that I discuss here only the physical size and simply the book of content, not the particular large size or the particular content of the book, the history of Iraq.

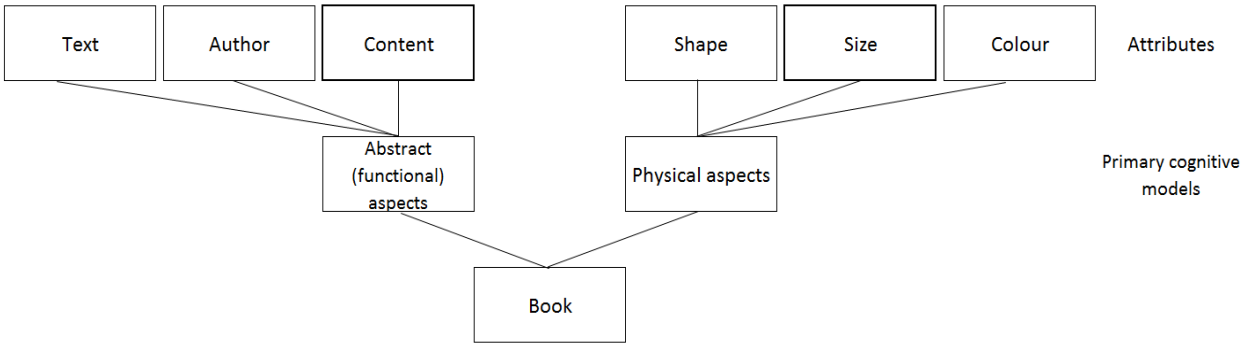


Figure 4.18 Partial cognitive model profile for [BOOK]

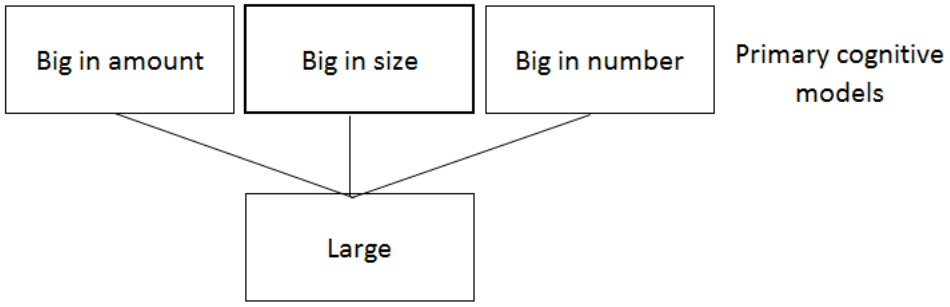


Figure 4.19 Partial cognitive model profile for [LARGE]

The book is a history of Iraq

Consider example (34), 'The book is a history of Iraq'. The word 'the' is a definite article and a closed lexical concept. The word 'book' is a noun and an open lexical concept. The word 'is' is a being verb and a closed lexical concept. The word 'a' is an infinite article and a closed lexical concept. The word 'history' is a noun and an open lexical concept. The word 'of' is a preposition and a closed lexical concept. The word 'Iraq' is a proper noun and a closed lexical concept. Throughout the operation of *lexical concept integration*, the open lexical concepts [HISTORY] and [IRAQ] integrate with each other and become a lexical conceptual unit of a predicate nominative, which then integrates with the open lexical concept of [BOOK], which is a complex lexical conceptual unit. At this moment, all open lexical concepts are lexically

specified. After that, *external lexical concept integration* occurs, and all closed lexical concepts and the concepts that were originally open lexical concepts are integrated and become a larger lexical conceptual unit. During the *interpretation*, each open lexical concept accesses its cognitive model. For example, [BOOK] includes cognitive models such as PHYSICAL ASPECTS, including SIZE, WEIGHT and COLOUR, and ABSTRACT (FUNCTIONAL) ASPECTS, including CONTENT', AUTHOR, PUBLISHER and so forth. In this context, the lexical concept [BOOK] accesses the CONTENT of the book in the primary cognitive model. The lexical concept [HISTORY] has cognitive models such as PAST EVENT, DEVELOPMENT OF SOMETHING and SUBJECT IN SCHOOL, and it accesses the primary cognitive model PAST EVENT in this context. The lexical concept [IRAQ] includes cognitive models such as GEOGRAPHICAL REGION, THE NATION STATE, LANGUAGE, HISTORY, CULTURE and so forth. In this context, the lexical concept IRAQ accesses HISTORY in the secondary cognitive model. It also accesses the secondary cognitive model [HISTORY], but 'a history of Iraq' has already been shown to be a predicate nominative in this sentence. Therefore, the lexical concept of [IRAQ] accesses the secondary cognitive level. Finally, the three open lexical concepts find the cognitive models that are suited to the sentence and match them to each other, resulting in a sentence-level informational characterisation. That is the sentence's meaning.

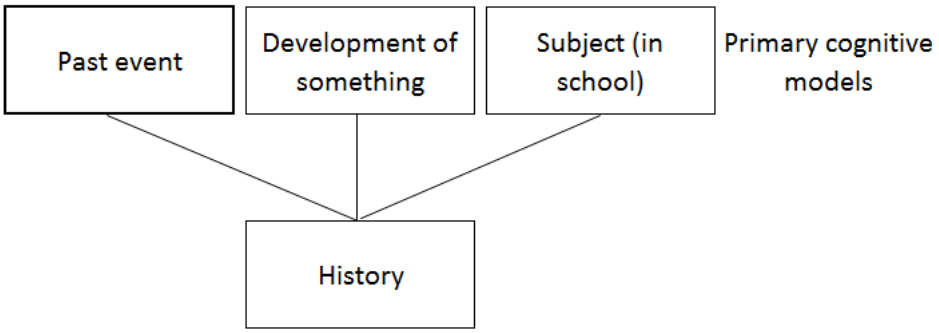


Figure 4.20 Partial cognitive model profile for [HISTORY]

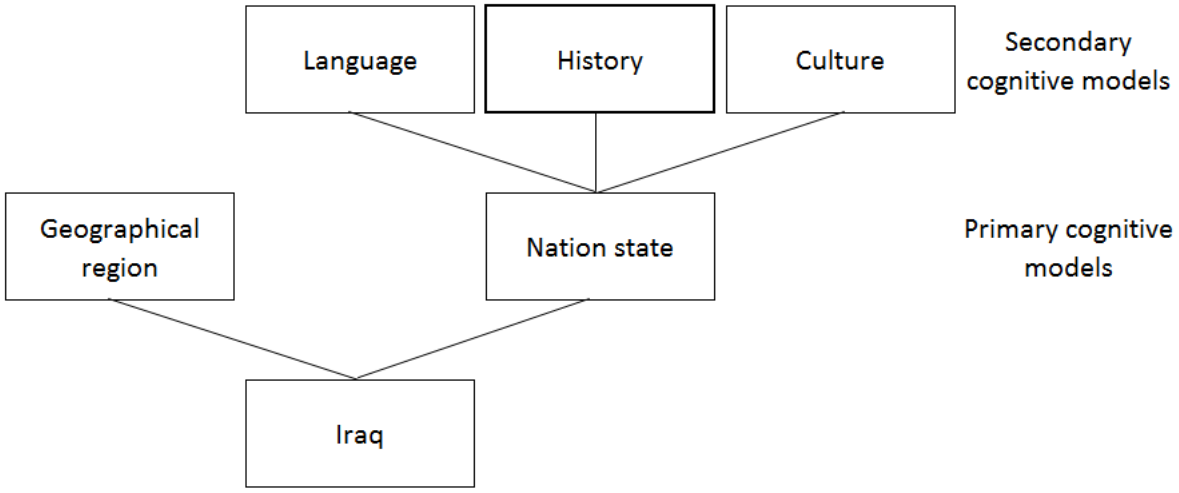


Figure 4.21 Partial cognitive model profile for [IRAQ]

This section highlights the different ideas of understanding the primary and secondary concepts. In more detail, the words 'very large' represent a physical aspect, while 'a history of Iraq' represents an abstract (functional) aspect. Although this thesis does not mention how to identify primary and secondary entities, metonymy can consist of secondary entities as well as primary concepts. In terms of this, this thesis supports Barcelona's opinion that both examples are metonymic since both sentences have metonymic cognitive structures, although both belong to primary and secondary entities. However, in my understanding, both physical aspects and abstract (functional) aspects can be primary entities because both are essential materials, and the given lexical concept cannot be completed without each entity. Therefore, both expressions are metonymic in this research. Although it is often debated which entity, physical or semantic, has the most central meaning for a given lexical concept, this thesis takes the position that both entities can be a primary cognitive model since both cognitive models provide well-established information that relatively conveys conventional, generic, intrinsic and/or unique information. A book is a physical aspect, and people can get some information by reading the book, such as its content, author, publisher and so on. Both physical and semantic attributes meet the conditions of the primary cognitive model.

Consider other types of non-figurative metonymic expressions:

(118) He painted the *door* and then walked through it (Dirven 2002)

(53) They would have to wait until the *school* broke up (Dirven 2002)

(19) *Time Magazine* is pretty vapid (Croft 1993)

Example (118) can also be categorised as a non-figurative metonymy. In this case, the sentence is divided into two parts: 'He painted the door' and 'walked through it'. Each informational characterisation is established and matches with the others to create a sentence-level meaning. Look at the first part: The internally open lexical concepts 'paint' and 'door' integrate with each other. 'Paint' means to apply a liquid to a surface. The metonymic vehicle [DOOR] has numerous potential cognitive models such as PHYSICAL ASPECTS, including DOOR KNOB, FRONT SIDE, BACK SIDE and HINGE, and ABSTRACT (FUNCTIONAL) ASPECTS, including OPEN, CLOSE, DOOR APERTURE and so forth. As shown in Figure 4.21, in the first phrase of 'paint the door', the given lexical concept [DOOR] facilitates access to the surface of the door, FRONT SIDE or BACK SIDE, which is an attribute in the primary cognitive model PHYSICAL ASPECTS. In the second phrase, 'walk through it', the lexical concept 'walk through' means that a real person passes through the door aperture. The lexical concept [DOOR] accesses DOOR APERTURE in an attribute in the primary cognitive model PHYSICAL ASPECTS. Therefore, the given lexical concept [DOOR] has two meanings in one sentence. They describe different perspectives, but both are located on the primary cognitive level. Therefore, the lexical concept of [DOOR] does not have figurativity, but still holds a metonymic cognitive structure; that is to say, it can be defined as non-figurative metonymy.

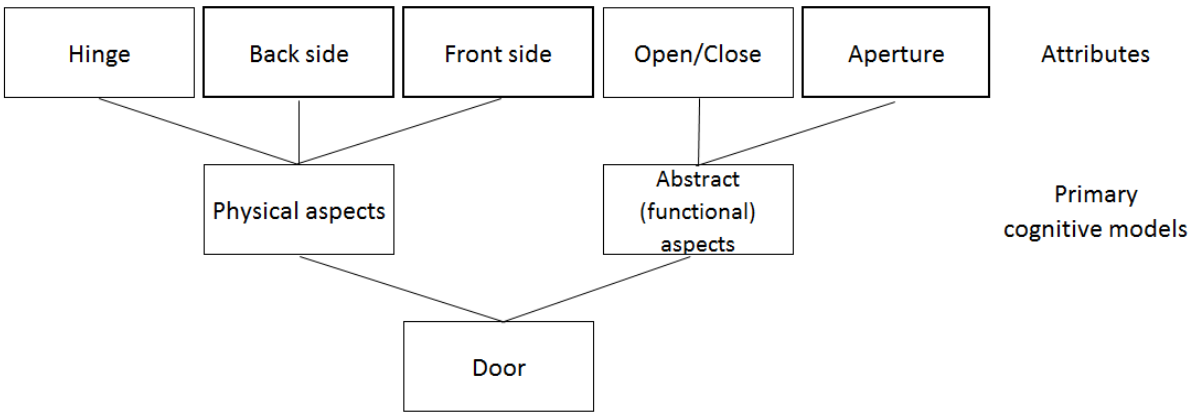


Figure 4.22 Partial cognitive model profile for [DOOR]

Example (53), ‘They would have to wait until the school broke up’, is also defined as a non-figurative metonymy. The metonymic vehicle [SCHOOL] contains several components such as SCHOOL YEAR, A HEADMASTER, LESSONS, STAFF, A DEPARTMENT, A BUILDING and so forth. Look at the following figure. The given lexical concept of [SCHOOL] activates the attribute SCHOOL YEAR in the primary cognitive model ABSTRACT (FUNCTIONAL) ASPECTS. At first, the lexical concept [SCHOOL] accesses the primary cognitive model ABSTRACT (FUNCTIONAL) ASPECTS and highlights the attribute SCHOOL YEAR. The lexical concept accesses one aspect of the lexical concept [SCHOOL], which is to say it includes a metonymic cognitive structure. Additionally, the metonymic vehicle accesses the primary cognitive level, and, therefore, this can be a non-figurative metonymy.

The last two examples can be called conjunctive metonymy, according to Dirven (2002). These are non-figurative but polysemous. All metonymic vehicles access primary cognitive levels, and, therefore, all expressions are non-figurative. Lexical concepts sometimes include different lexical concepts; for example, ‘tea’ has several other meanings, including ‘evening meal’, ‘light meal’ and ‘marijuana’ (See Dirven 2002). In the LCCM framework, polysemous words should be cut off in the operation of lexical concept selection. Therefore, Dirven’s idea is not compatible with the idea of this thesis, but the direction of literal/metonymic/metaphorical continuum is similar.

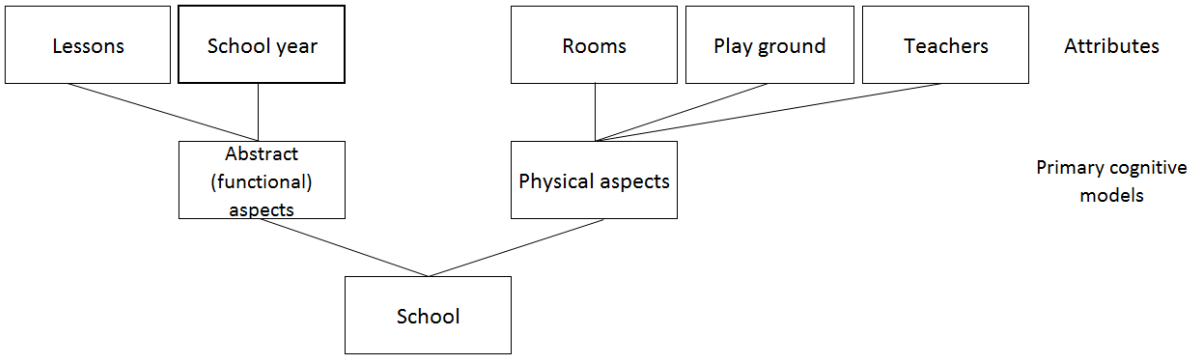


Figure 4.23 Partial cognitive model profile for [SCHOOL]

Example (19), ‘*Time Magazine* is pretty vapid’, is an expression that might be understood as both literal and metonymic, but when applied to the LCCM framework, it can be

defined as a non-figurative metonymy. As shown in Figure 4.23, the lexical concept [TIME MAGAZINE] includes many elements such as SIZE, WEIGHT, COLOUR, CONTENT, WRITER, PUBLISHER and so forth. The lexical concept [TIME MAGAZINE] facilitates access to the primary cognitive model ABSTRACT (FUNCTIONAL) ASPECTS and highlights the attribute CONTENT. The vehicle still remains at the primary cognitive level, and the relationship between the vehicle and target holds a metonymic cognitive structure. Therefore, this is a non-figurative metonymy.

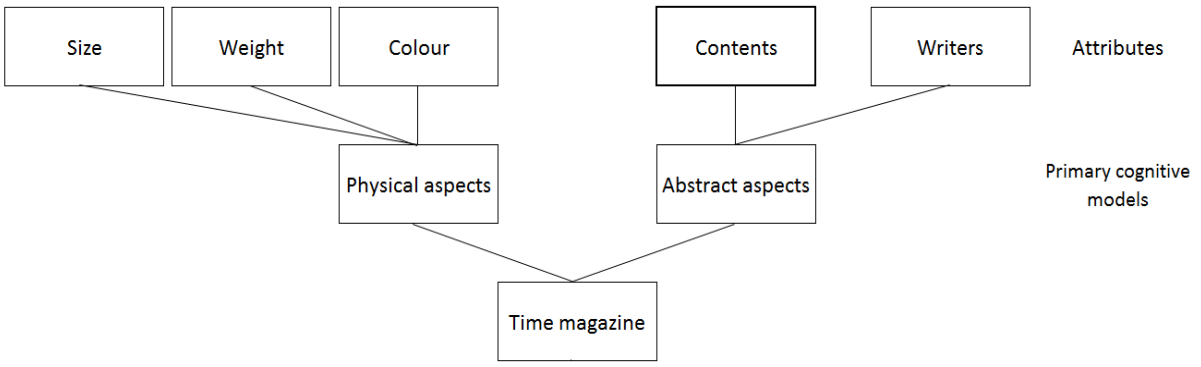


Figure 4.24 Partial cognitive model profile for [TIME MAGAZINE]

4.3.2.2 Summary of Non-Figurative Metonymies

This section has examined non-figurative metonymic expressions, which are schematically different from 'literal' expressions in this thesis. Although literal and non-figurative vehicle reaches the same cognitive level (primary) in a given concept, a vehicle in a literal expression tends to access more than one primary cognitive model, while a vehicle in a non-figurative metonymy accesses one primary cognitive model. Because both vehicles access the primary cognitive level, both expressions do not include figurativity. As shown in the examples 'I bought a *car'* and 'I borrowed a *book'*, the given lexical concept affords access to more than two primary cognitive models, the semantic gap between the vehicle and target is smaller than in non-figurative metonymy, and the metonymic cognitive structure of one entity referring to another is collapsed by accessing more than one primary cognitive model. Therefore, these examples are slightly different from non-figurative metonymy.

On the other hand, non-figurative examples take a slightly different approach to access their cognitive models. Their lexical concepts refer to one aspect of the lexical concept. The word ‘car’ in the example ‘I fill a car’ refers to ‘a fuel tank’; the word ‘car’ in the example ‘I washed a car’ refers to ‘the outside of a car’; and the word ‘car’ in the example ‘I vacuum a car’ refers to ‘the inside of a car’. These three examples use an operation where a whole entity refers to a part of the entity, which is used in a metonymic cognitive structure. The examples ‘The book is a history of Iraq’ and ‘The book is very large’ can also be understood in the same way. Focussing on the word ‘book’ in the example ‘The book is a history of Iraq’ refers to the content of the book, while in the example ‘The book is very large’, it refers to the size of the book. Both examples describe one aspect of the book. Therefore, these examples activate one of their attributes in a primary cognitive model, which is slightly higher than primary cognitive levels. They also include a metonymic cognitive structure, where one entity refers to another within the same entity, such as the whole of lexical concepts referring to an aspect of the book. In terms of this, unlike ‘literal’ expressions in this thesis, these expressions are non-figurative. The biggest difference between literal expressions and non-figurative metonymies is that literal vehicles access entire primary cognitive models, while non-figurative metonymic vehicles access (highlight) one primary cognitive model.

Note that, as mentioned above, there is an argument that physical aspects are more of a primary entity while abstract aspects are more of a secondary entity in a given lexical concept. However, this thesis considers both aspects as belonging to a primary cognitive model, which means that both are essential elements of the lexical concept irrespective of whether they are physical or abstract aspects. In addition, in non-figurative expressions, attributes (values) are often highlighted. In some figures (e.g., 4.22 and 4.23), it seems that the length of the path between a vehicle and attribute in a primary cognitive model is somehow vertically higher than the length between a vehicle and primary cognitive model. However, attributes are kinds of elements in the primary cognitive model and still belong to the primary cognitive level. Therefore, the level of figurativity is not affected. That is, attributes in a primary cognitive model tend to involve the primary cognitive level, while attributes in a secondary cognitive model tend to involve the secondary cognitive level.

Just like for literal expressions, ‘lexical concept selection’ in the LCCM framework is important for the meaning construction of non-figurative metonymy, since it maintains literalness. Each lexical concept in a sentence accesses the primary cognitive model, and

'lexical concept selection' directly guides the direction of their targets. However, non-figurative metonymy uses the PART FOR THE WHOLE/WHOLE FOR THE PART metonymic cognitive structure, which means that in order to narrow down a target, the *integration* and *interpretation* process of lexical concepts and non-linguistic information is necessarily taken into account.

4.3.3 Figurative Metonymic Expressions

This section considers figurative metonymic expressions, which include a metonymic cognitive structure and figurativity by nature. The difference between non-figurative and figurative metonymic expressions is access sites. A vehicle in a non-figurative metonymic expression accesses one of the primary cognitive models, and figurative metonymic expressions access a secondary cognitive model that conveys relatively unconventional, abnormal, extrinsic and/or unique knowledge that might not be shared with all society members (see Chapter 3 for more detail about the difference between primary and secondary cognitive models). Consider the construction of the following examples in light of access site and figurativity:

(119) The *kettle* is boiling (Lakoff & Johnson 1980)

(120) She bought *Shakespeare* (Lakoff & Johnson 1980)

(54) The *Crown* has not withheld its assent to a Bill since 1707 (Dirven 2002)

(20) *Time* took over Sunset Magazine, and it's gone downhill ever since (Croft 1993)

(121) We need more *hands* (Lakoff & Johnson 1980)

The kettle is boiling

Example (119), 'The kettle is boiling', is well known as a metonymic expression. A kettle is a machine that boils water (liquid) inside it; thus, 'the kettle' is describing water (liquid). The target, [WATER], is strongly independent of the vehicle, [KETTLE], although the metonymic operation arises from the physical contact between the two, which occurs in a single concept, [KETTLE]. In addition, individuals do not normally imagine that 'the kettle is melting', because

we naturally avoid inconsistent meanings. In other words, individuals attempt to find another way to understand something coherently if a vehicle attempts to access an inconsistent meaning based on context. Within the LCCM framework, as shown in Figure 4.24, the figurative vehicle [KETTLE] facilitates access to the secondary cognitive model WATER. The conceptual gap between the vehicle and target is wider; in other words, the concept of WATER (target) is relatively independent of the lexical concept of [KETTLE], and, as a result, the level of figurativity is high. This expression can be defined as a figurative metonymy.

If individuals read this expression literally, it becomes 'the kettle body is boiling (like melting)'. However, we understand this sentence to mean WATER (IN THE KETTLE) STARTS BOILING because we use experiences and stored non-linguistic knowledge. Why do people rarely misunderstand these sentences? The mechanism is slightly different than in the previous examples. Once the lexical concept selection is finished, the *integration* process begins. In the integration process, the open lexical concepts [BOIL] and [KETTLE] integrate with each other and become lexically specified and then undergo *external lexical concept integration* with all closed lexical concepts. During this process, they unpack their linguistic content and become a sentence-level lexical conceptual unit. At this point, all potential cognitive models are established, and each lexical concept is associated with its semantic values. The next process is *interpretation*. Each open lexical concept in the sentence accesses its cognitive model. Figure 4.24 shows that the lexical concept [KETTLE] affords access to the secondary cognitive model [WATER]. The process is constrained by the principle of ordered search, through which a vehicle tends to access primary cognitive models and then accesses secondary cognitive models.

Accessing the secondary cognitive level means that the lexical concept accesses a cognitive model that is far from the conventional, generic, intrinsic and/or unique knowledge associated with the lexical concept, giving rise to figurativity. Figure 4.25 shows that the lexical concept [BOIL] accesses the attribute TO HEAT UNTIL THE LIQUID INSIDE STARTS TO BOIL in the primary cognitive model TO HEAT LIQUID HOT ENOUGH. The two cognitive models, [WATER] and TO HEAT UNTIL THE LIQUID INSIDE STARTS TO BOIL, match with each other. This results in 'water in the kettle is boiling' because the metonymic vehicle [KETTLE] accesses a secondary cognitive level, which has figurativity and is far from the original meaning of 'kettle'.

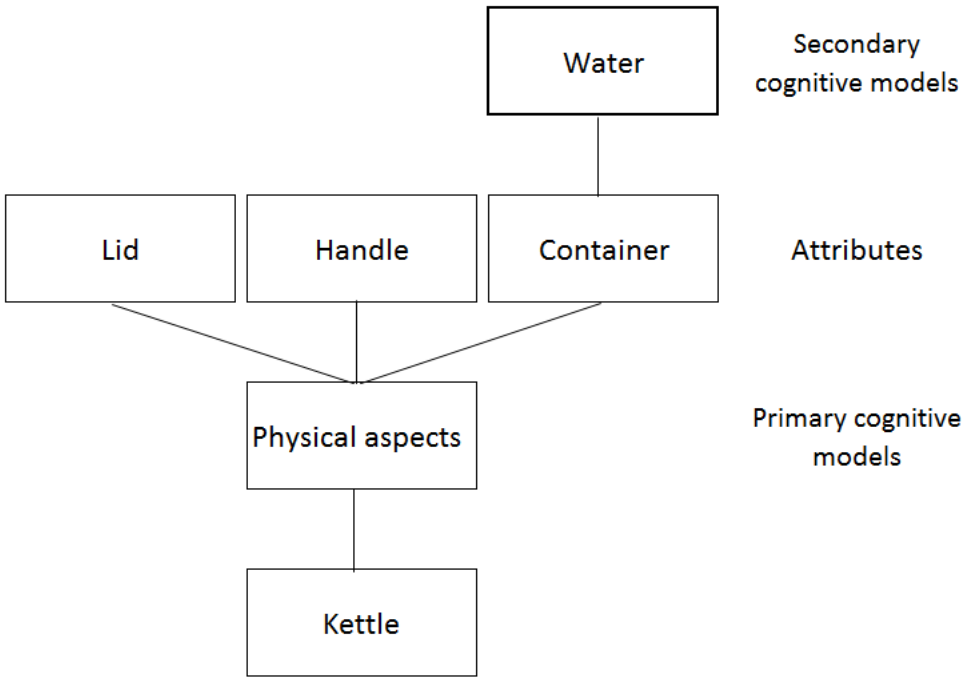


Figure 4.25 Partial cognitive model profile for [KETTLE]

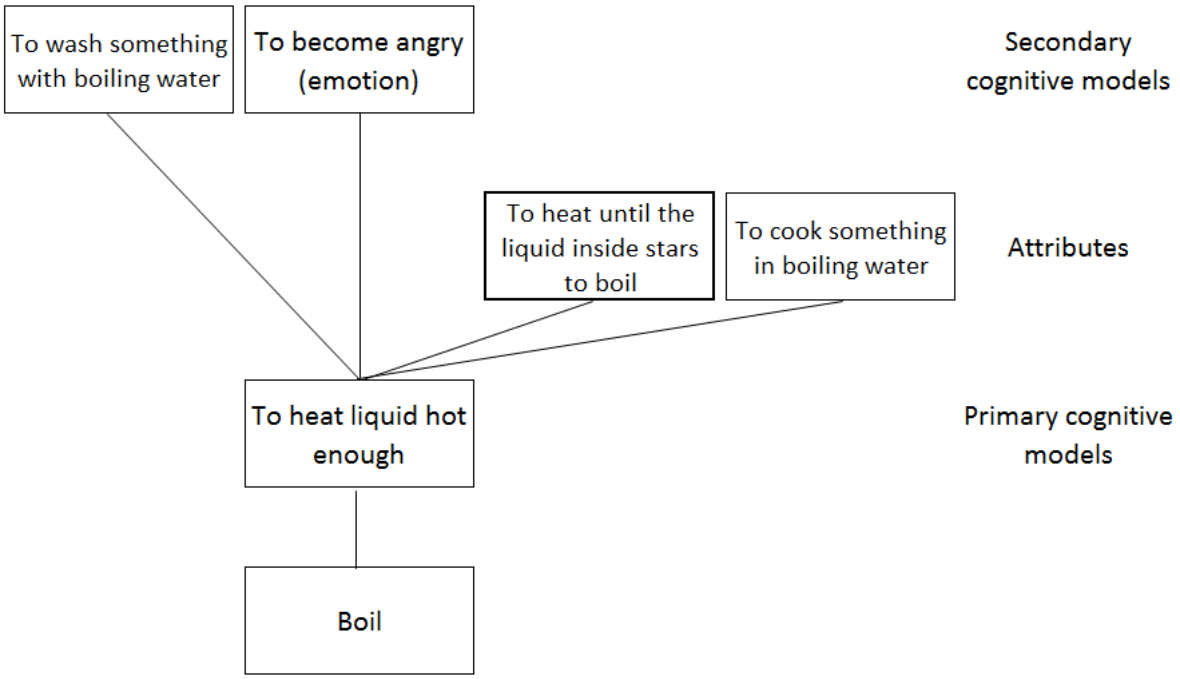


Figure 4.26 Partial cognitive model profile for [BOIL]

She bought Shakespeare

The next example, (120), 'She bought Shakespeare', is a well-known metonymic expression. Shakespeare was a human being and a popular playwright of English literature in the 16th century. His works are still famous and widely known. If we read this sentence with its literal meaning, she bought a person named Shakespeare. However, individuals rarely understand 'She bought Shakespeare' as a description of physically obtaining a person named Shakespeare because trade in humans is a serious crime, and the phrase [BUY + HUMANS] does not arise in language use in everyday life. Individuals know that this sentence should be understood differently than in its literal context.

In fact, 'Shakespeare' in this context refers to the playwright's works. Thus, a meaning shift occurs from Shakespeare as a human being to his produced works. Look at the following figure. The vehicle [SHAKESPEARE] facilitates access to the target in the secondary cognitive model HIS WORKS. Therefore, this example is defined as a figurative metonymy. Consider each lexical concept in detail. The word 'She' is a pronoun (the third person) and an animate entity, which is an internally closed lexical concept. The word 'bought' is a verb in the past tense and shows a certain process, which is an internally open lexical concept. The word 'Shakespeare' is a proper noun (name) and an internally open lexical concept.

In the process of lexical concept selection, the lexical concept [SHAKESPEARE] is selected as a famous historical figure and not an ordinary person named Shakespeare. As discussed in Chapter 3, a lexical concept may associate with a number of different lexical concepts. For example, the preposition 'in' has numerous lexical concepts, including ENCLOSURE (e.g., 'The toy is in the box'), PHYSIOLOGICAL STATE (e.g., 'He's in poor/good health'), PSYCHOSOMATIC STATE (e.g., 'John is in shock/pain'), SOCIO-INTERPERSONAL STATE (e.g., 'The girl is in trouble [with the authorities]') and PROFESSIONAL STATE (e.g., 'He is in banking') (Evans 2009a). This is called polysemy. The name 'Shakespeare' can loosely be described as polysemous because it is a person's name. Therefore, the linguistic content should be 'Shakespeare', but it can refer to different people named Shakespeare, whose lexical concepts are different and access distinct cognitive models. People's names have potentially different lexical concepts (different people). This is called a single selection, or the selection of more than one lexical concept for a single vehicle, so people select one lexical concept among several lexical concepts (see Chapter 3). That is to say, Shakespeare was a human being, but he

was also a very famous historical figure in English literature. As a result, individuals expect the word 'Shakespeare' to be an abstract concept rather than refer to a physical human being.

The next process is *interpretation*. Open lexical concepts integrate with each other and are lexically specified. The lexically specified lexical concepts and the rest of the lexical concepts, such as closed lexical concepts, integrate with each other to form a sentence-level lexical conceptual unit. At this point, all potential cognitive models are established, and each lexical concept unpacks its linguistic content and is associated with its semantic values. Once a lexical conceptual unit is created, open lexical concepts such as [BUY] and [SHAKESPEARE] undergo matching. This is shown in Figures 4.26 and 4.27. The lexical concept [BUY] accesses the primary cognitive model TO GET SOMETHING BY PAYING MONEY. The lexical concept of [SHAKESPEARE] accesses the secondary cognitive model HIS WORKS. The two accessed cognitive models match with each other and become a sentence-level informational characterisation: AN ANIMATE ENTITY BOUGHT A BOOK WRITTEN BY SHAKESPEARE.

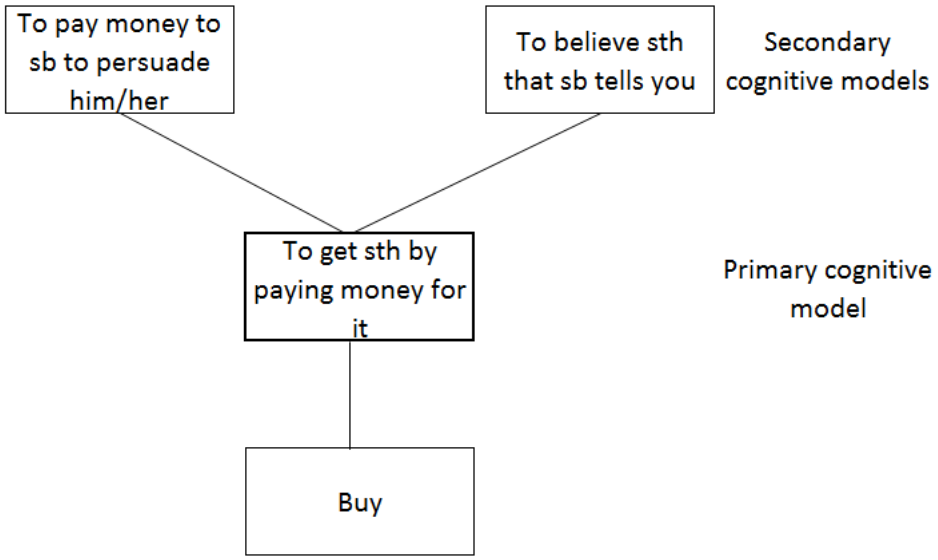


Figure 4.27 Partial cognitive model profile for [BUY]

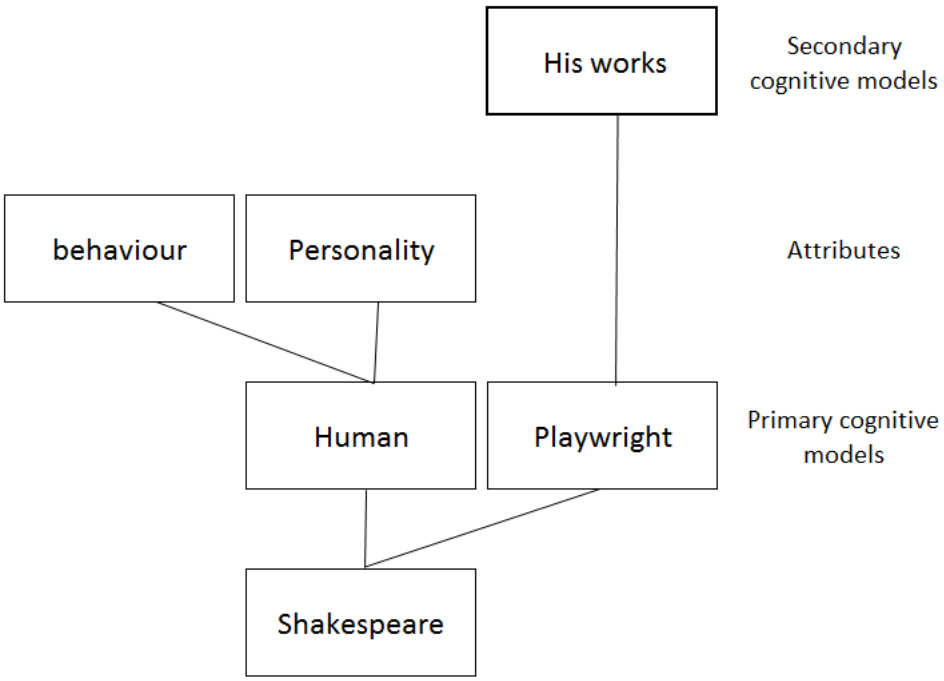


Figure 4.28 Partial cognitive model profile for [SHAKESPEARE]

The Crown has not withheld its assent to a Bill since 1707

The next example is a figurative metonymy but is more complex than the previous examples. Example (54) means that the monarch has the right to consult all bills passed by Parliament, but the monarch has not refused a bill since 1707. In this context, since the subject of this sentence ('the Crown') should be an animate entity, 'the Crown' is not a physical aspect of a hat but the animate entity 'monarch'. The word 'crown' is literally a hat for a king or a queen who acts as Head of State. The monarch is a Head of State, and wearing a 'crown' is a unique feature of the monarch. Therefore, the 'crown' is a symbol of the monarch.

In the integration process, all open lexical concepts integrate with each other and become a lexical conceptual unit. In this context, the open lexical concepts [CROWN], [WITHHOLD], [ASSENT] and [BILL] undergo *internal lexical concept integration*. They then go through *external lexical concept integration* with other closed lexical concepts such as [THE], [ITS], [TO], [A], [SINCE] and [1707]. Once a lexical conceptual unit is created, each open lexical concept undergoes matching. This is illustrated in Figure 4.30. The open lexical concept [CROWN] accesses the secondary cognitive model MONARCH, which means that 'crown' has

figurativity. The lexical concept [BILL] is used in many scenarios, including 'name', 'for payment', 'money', 'in a restaurant', 'advertisement', 'in Parliament', 'entertainment' and so forth. It changes its meaning in each situation. When 'Bill' is used as a name, it is a homonymy, or a linguistic vehicle that has historically, synchronically different meanings (e.g., bank). The definitions of 'bill' that mean money or a written proposal for a new law have a polysemous relationship, in which a lexical item is commonly associated with two or more meanings that appear to be related in some way. Both lexical concepts are derived from the Latin word 'bulla' (a document with a seal). The lexical concept [BILL] can contain both polysemous lexical concepts in the word. In the LCCM theory, the *lexical concept selection* and *integration* processes determine the scenes in which the linguistic content is unpacked based on the context, and, as a result, the context is taken into account in meaning construction. Figure 4.29 shows how the lexical concept [BILL] accesses the secondary cognitive model [A WRITTEN PROPOSAL FOR A NEW LAW].

The lexical concepts [WITHHOLD] and [ASSENT] do not have many potential cognitive models. According to the Oxford and Cambridge online dictionaries, the lexical concept [WITHHOLD] has one main meaning, which is TO REFUSE TO GIVE SOMEONE SOMETHING, and [ASSENT] means OFFICIAL APPROVAL OR AGREEMENT FROM SOMEONE WHO HAS AUTHORITY. That is to say, these main meanings are the primary cognitive models to which the lexical concepts afford access. Finally, the cognitive models accessed via the lexical concepts [CROWN], [BILL], [WITHHOLD] and [ASSENT] match with each other. Open lexical concepts match with each other in a schematically coherent way and become an informational characterisation: THE MONARCH HAS NOT REJECTED A PROPOSAL FOR A NEW LAW SINCE 1707.

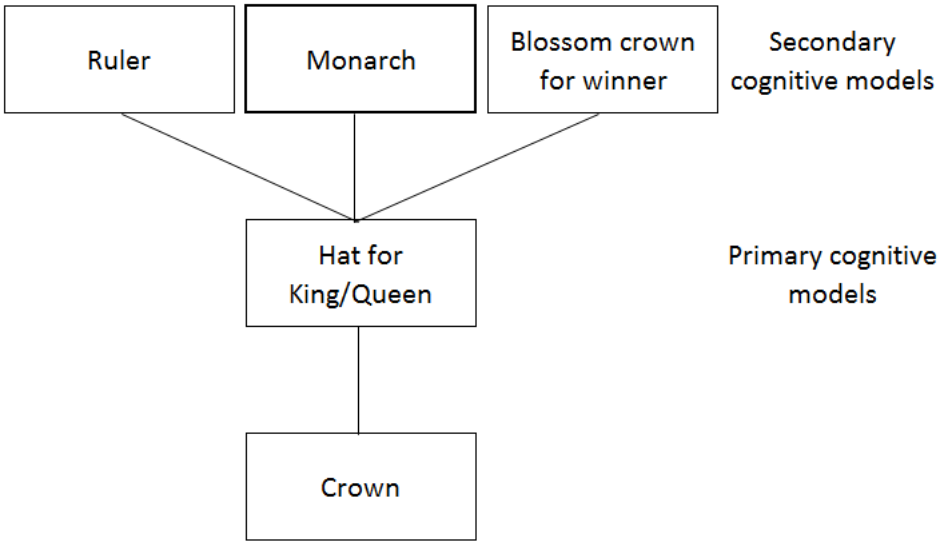


Figure 4.29 Partial cognitive model profile for [CROWN]

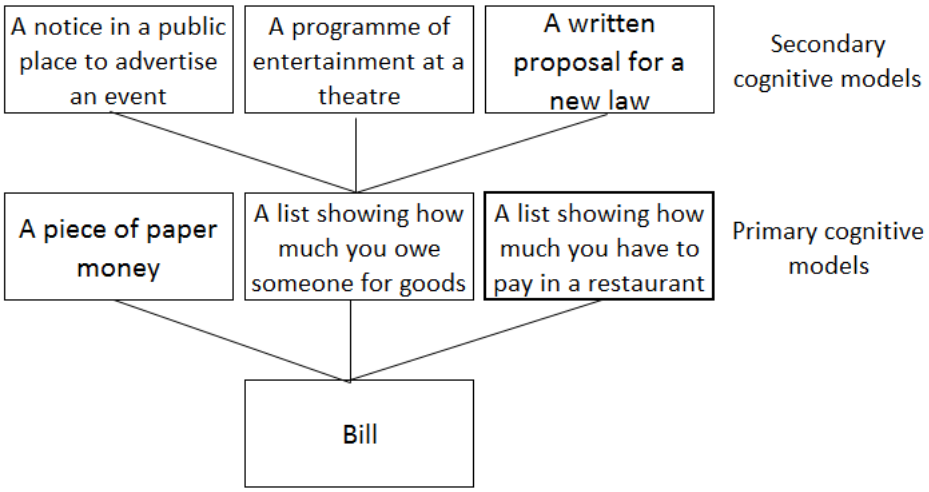


Figure 4.30 Partial cognitive model profile for [BILL]

Time took over Sunset Magazine, and it's gone downhill ever since

The example 'Time took over Sunset Magazine, and it's gone downhill ever since' can be considered a figurative metonymy. The example consists of two sentences connected by the word 'and'. In light of this, the semantic construction is more complex than in other examples. In lexical concept selection, each lexical concept is identified as an appropriate lexical concept

loosely related to the context, reliant upon *co-selection*. *Co-selection* chooses the most appropriate lexical concept, taking linguistic and non-linguistic context into account. The word 'Time' is a pronoun (name) and open lexical concept. The phrase 'took over' is a phrasal verb and open lexical concept. The word 'Sunset Magazine' is a pronoun (name) and open lexical concept. The word 'and' is a conjunction and closed lexical concept. The word 'it' is an anaphoric reference to 'Sunset Magazine'. The phrase 'has gone downhill' is the past perfect of the phrase 'to go downhill', which is an open lexical concept. The phrase 'ever since' is an adverb phrase and closed lexical concept.

In the integration process, open lexical concepts such as [TIME], [TOOK OVER], [SUNSET MAGAZINE] and [GO DOWNHILL] integrate with each other and become lexically specified, giving rise to two conceptual units: the first phrase before 'and' and the second phrase after 'and'. Open lexical concepts then undergo *external lexical concept integration* with the rest of the closed lexical concepts. These two lexical conceptual units combine with the closed lexical concept 'and' and become a complex lexical conceptual unit at the sentence level. Once a complex lexical conceptual unit is established, each open lexical concept accesses its cognitive models. This is shown in the following figures. In the first part of the sentence, 'Time took over Sunset Magazine', the lexical concepts [TIME], [TAKE OVER] and [SUNSET MAGAZINE] match with each other following the Principle of Guided Matching, which means that the matching process is always compatible with the output of *lexical concept integration* (Evans 2009a). The metonymic vehicle in this sentence is 'Time (Magazine)'. Encyclopaedic knowledge of 'Time Magazine' consists of the conceptual knowledge of its printed and online versions, journalism, editing, ownership and so forth. The lexical concept [TIME MAGAZINE] accesses the secondary cognitive model PUBLISHER. The lexical concept [TAKE OVER] accesses the primary cognitive model TO GAIN CONTROL OF A BUSINESS, and the lexical concept [SUNSET MAGAZINE] accesses the secondary cognitive model of PUBLISHER. The three accessed cognitive models then match with each other. This matching process is in agreement with the principle of schematic coherence, which means that the content associated with entities, participants and the relations holding between them must exhibit coherence in fusion operations (Evans 2009a:245). This then becomes an informational characterisation. At the same time, the second phrase is also processed (it's gone downhill ever since). The open lexical concepts in the second part of the sentence, such as [GO DOWNHILL], go through the integration process together with other closed lexical concepts and become the other informational characterisation, IT HAS BECOME CONTINUOUSLY WORSE SINCE THAT TIME. The operation occurs in the two phrases

simultaneously and is constrained by the principle of simultaneous matching, which indicates that 'the content associated with entities, participants and the relations holding between them must exhibit coherence in fusion operations' (Evans 2009a:245).

Finally, the two informational characterisations combine and become a sentence-level informational characterisation, which is the sentence's meaning: TIME (MAGAZINE) INC. GAINS CONTROL OF SUNSET MAGAZINE, AND IT HAS BECOME CONTINUOUSLY WORSE SINCE THAT TIME.

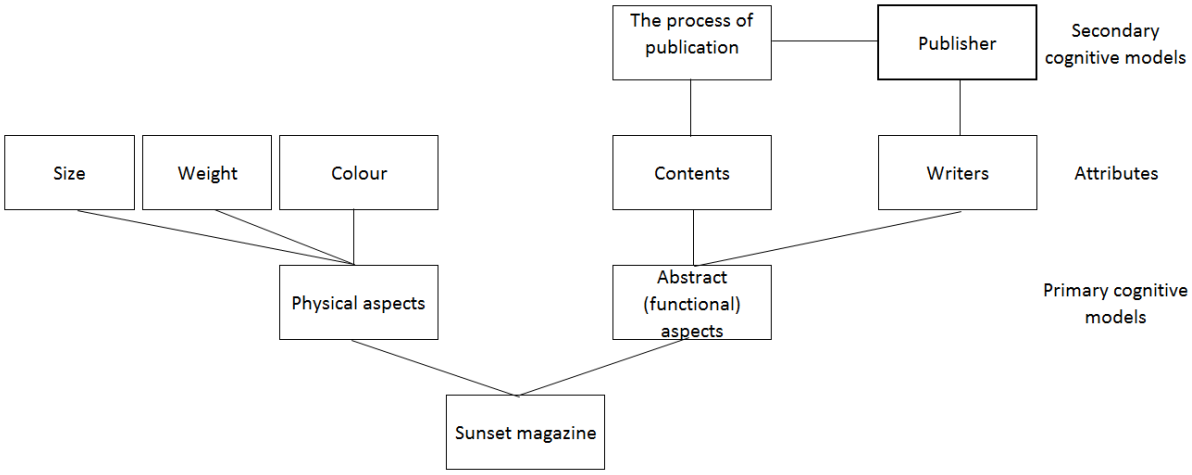


Figure 4.31 Partial cognitive model profile for [SUNSET MAGAZINE]

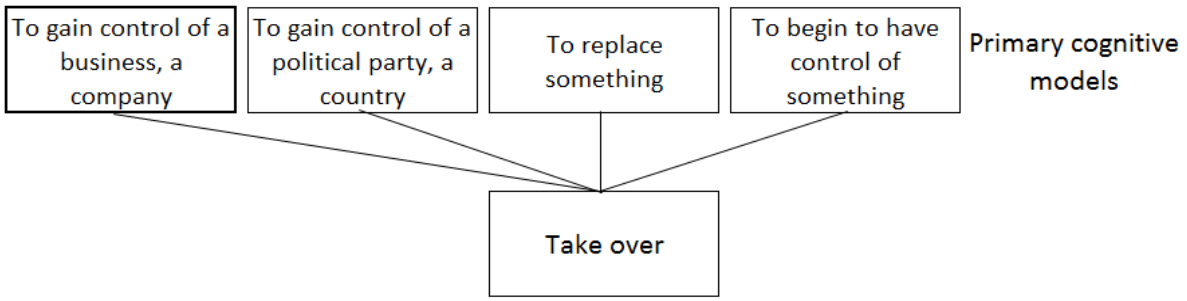


Figure 4.32 Partial cognitive model profile for [TAKE OVER]

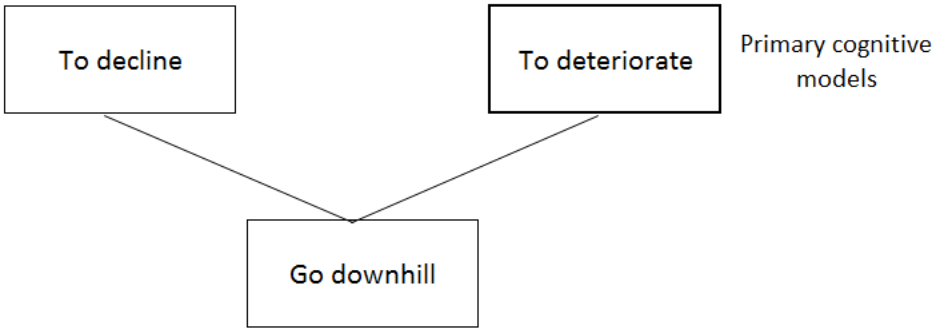


Figure 4.33 Partial cognitive model profile for [GO DOWNHILL]

We need more hands

Example (121), 'We need more hands', means 'we need more people for doing (helping with) something'. It does not mean 'we need hands as parts of bodies'. Consider the details of the *interpretation* process. The word 'We' is a subject, pronoun (the first person plural) and animate entity, which is categorised as an internally closed lexical concept. The word 'hands' is a plural noun and metonymic vehicle in this context, which is an open lexical concept. The word 'need' is a verb and open lexical concept. The word 'more' is a determiner (adjective) and open lexical concept.

In this context, the word 'hand' is represented as a 'person' who will help with something. The word 'hand' is used for doing something such as writing, carrying or assembling something and is a part of the human body, to which it is physically connected. Since 'hands' cannot be separated from the body and people use hands to do something, the meaning shift occurs from 'hands' to 'people' (indicating a shortage of workers). The lexical concept 'need' includes the meanings 'to have to have something or someone since somebody cannot do something without them' or 'to feel that somebody wants something very much'. The word 'more' includes meanings such as 'having in greater quality/amount/number' and 'something that happens a greater number of times or to a greater degree (additional/further something)'. In the integration process, the open lexical concepts such as [NEED], [MORE] and [HAND] integrate with each other. Once the *internal lexical concept integration* is finished, *external lexical concept integration* occurs, which integrates with the closed lexical concept and open lexical concepts that resulted from the internal integration process. Both lexical concepts unpack their linguistic content and become a lexical conceptual unit. Once a lexical

conceptual unit is established, each open lexical concept undergoes matching within its cognitive model, where it further specifies its meaning. This is shown in the following figures 4.34, 4.35, and 4.36. The lexical concept [MORE] accesses the primary cognitive model ADDITIONAL/FURTHER; the lexical concept [HAND] accesses the secondary cognitive model PERSON; and the lexical concept [NEED] accesses the primary cognitive model TO HAVE TO HAVE (WANT/SHOULD) SOMETHING. Once this matching is finished, the accessed cognitive models match with each other. They then become a sentence-level informational characterisation, ANIMATE ENTITIES WANT TO HAVE ADDITIONAL PEOPLE, together with the other related lexical concepts.

Nonetheless, the example might be identified as ANIMATE ENTITIES HAVE TO GET FURTHER HELP. In this case, the figurative vehicle simply accesses the secondary cognitive model 'help' in the LCCM framework. Recall that there is a similar example in the literature called a metonymic chain, established by Ruiz de Mendoza (2003). According to Ruiz de Mendoza, there is a connection between a hand and a human being, and a human being extends the meaning of the action of helping. Each extension occurs in a single domain; therefore, there is a linkage among the three entities. However, since it seems that he does not describe systematic knowledge structures such as primary and secondary cognitive levels, like the LCCM framework does, the way to connect the three entities remains ambiguous. In the LCCM framework, the lexical concept 'hand' has some physical aspects (a part of the body) and represents some abstract aspects such as 'to manage something or people', 'to help people' and 'to have ability of controlling something'. The lexical concept [HAND] simply accesses the secondary cognitive model TO HELP in this case. Therefore, this example is a figurative metonymic expression.

On the other hand, Peirsman & Geeraerts (2006) claim that 'We need some good heads on the project' is a prototypical metonymy and mainly includes SPATIAL PART FOR WHOLE relationships between the two entities, including strength of contact and a high degree of boundedness. If individuals interpret this example as ANIMATE ENTITIES WANT TO HAVE ADDITIONAL PEOPLE, this should be connected with a perceptual connection between a part of the body (hand) and a human being, following the notion of Peirsman and Geeraerts (2006), even though they do not mention the distinction between primary and secondary cognitive levels. This is strong metonymic link between the vehicle and target.

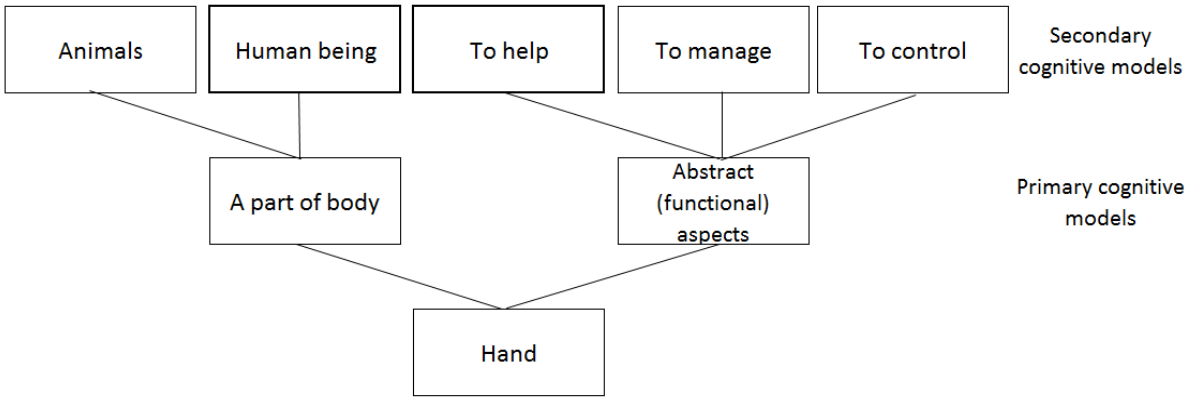


Figure 4.34 Partial cognitive model profile for [HAND]

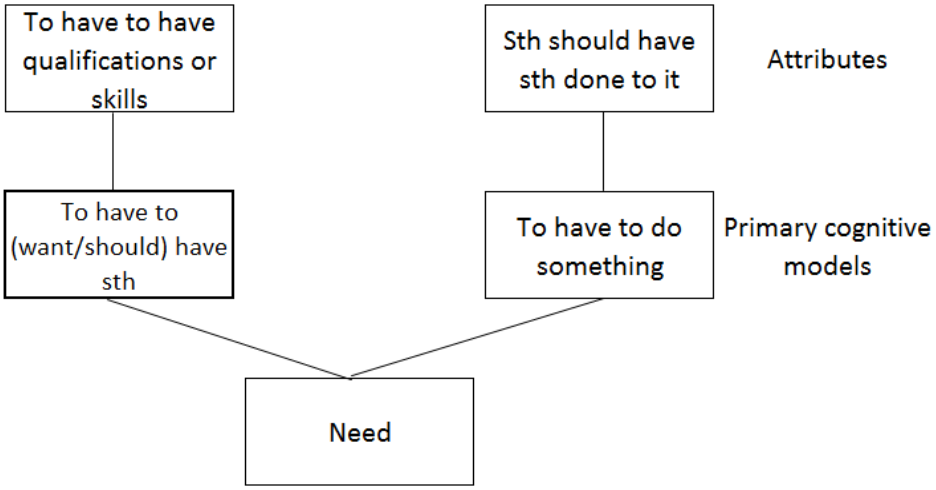


Figure 4.35 Partial cognitive model profile for [NEED]

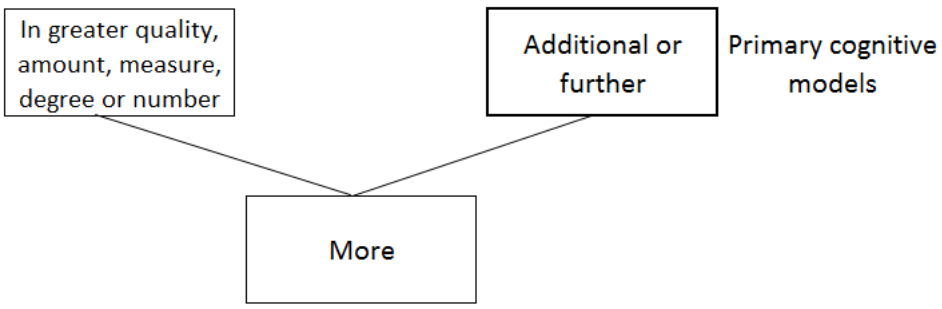


Figure 4.36 Partial cognitive model profile for [MORE]

4.3.3.1 Summary of figurative metonymic expressions

This section has reanalysed metonymic expressions that can be defined as figurative metonymies. The metonymic vehicles access secondary cognitive models, which have longer access routes than non-figurative metonymies. In other words, there is a semantic gap between the primary cognitive model and the secondary cognitive model; therefore, the accessed secondary cognitive model has figurativity. It also conveys relative unconventional, abnormal, extrinsic and/or unique knowledge and is a relatively independent concept from the original concept in the primary cognitive model. Metonymic vehicles describe one aspect of the encyclopaedic knowledge of the lexical concept, so they still possess a metonymic cognitive structure. Therefore, all examples in this section are defined as figurative metonymies.

Unlike literal expressions, (higher) figurative metonymy is subject to the operations of *integration* and *interpretation*. A metonymic vehicle accesses a target in its cognitive model, and, during the course of the understanding process, the vehicle integrates with other lexical concepts and is interpreted as having sentence-level meaning, which is a metonymic meaning. Looking at this in more detail, we can see that metonymicity is related to *co-selection*. A metonymic vehicle is often affected by other lexical concepts and other non-linguistic features such as an utterance's context, an assumption about the preceding discourse, the general nature of the conception, the addressee's assumptions and the addresser's communicative intentions. Consequently, during *lexical selection*, *integration* and *interpretation*, a sentence's frame and situation are narrowed down and lexical concepts are identified, which eventually match with each other to become a sentence-level meaning. Therefore, both the *fusion* and *co-selection* processes lead to metonymicity.

4.3.4 Higher Figurative Metonymic Expressions

This section considers a higher figurative metonymic expression, which has higher figurativity than figurative metonymic expressions.

The ham sandwich has asked for the bill

Example (98), 'The ham sandwich has asked for the bill', means 'a customer who ordered a ham sandwich has asked to make a payment'. It does not mean 'a non-animate entity, the food ham sandwich, has surprisingly asked to make a payment'. The controversial lexical concept is 'ham sandwich'; in this context, the words extend their meaning metonymically. This is an internally open lexical concept. The word 'the' is a definite article and internally closed lexical concept. The phrase 'ham sandwich' is a noun and internally open lexical concept. The words 'asked for' are a phrasal verb and internally open lexical concept. The word 'a' is an indefinite article and internally closed lexical concept. The word 'bill' is a noun and internally open lexical concept.

Most of the lexical concepts are applied to single-instance single selection, but, as shown in the previous section, the word 'bill' has multiple lexical concepts, including a name, money and a proposed new law. In this context, the option regarding money should be selected; this is called single-instance multiple selection. The next process is *integration*. Open lexical concepts such as [HAM SANDWICH], [ASK FOR] and [BILL] undergo *internal lexical concept integration* and become lexically specified. Once the open lexical concepts are lexically specified, they undergo *external lexical concept integration* and match with the rest of the lexical concepts, such as [THE] and [A]. Their linguistic content is unpacked in this process and they become a lexical conceptual unit. Within the *interpretation* process, each open lexical concept accesses its cognitive model; in other words, each lexical concept determines its meaning more specifically. Consider the following figures 4.36, 4.37, and 4.38. The metonymic vehicle [HAM SANDWICH] accesses and matches with the higher secondary cognitive model. Generally, 'ham sandwich' does not naturally combine with 'customer', but *co-selection* is used to complement this figurative gap. By knowing the topic and other linguistic and non-linguistic features, individuals can select the most appropriate lexical concept, which leads to the correct figurative meaning. This is inherited from Croft's (1993) view that the whole meaning gives parts meaning. The open lexical concept [ASK FOR] accesses and matches with the primary cognitive model TO TRY TO OBTAIN BY REQUESTING. The lexical concept [BILL] accesses the primary cognitive model A LIST SHOWING HOW MUCH YOU HAVE TO PAY IN A RESTAURANT. Finally, the accessed cognitive models match with each other and become the sentence-level informational characterisation A CUSTOMER (WHO ORDERED A HAM SANDWICH) TRIES TO OBTAIN A LIST SHOWING HOW MUCH YOU HAVE TO PAY IN A RESTAURANT.

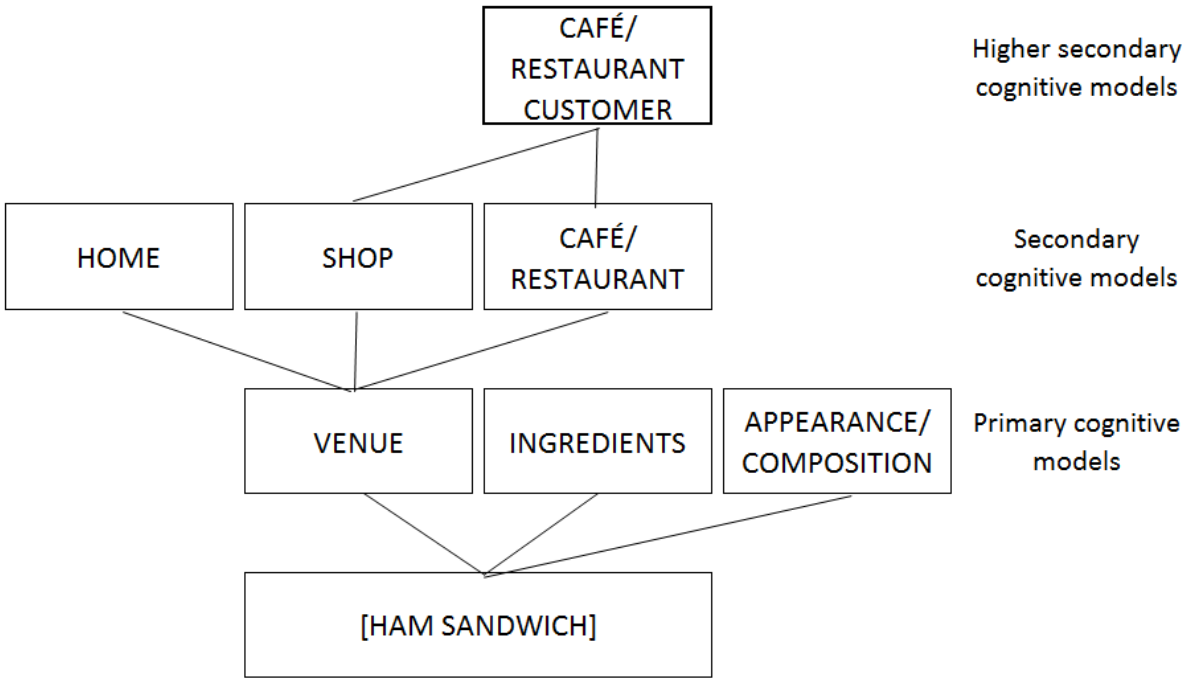


Figure 4.37 Partial cognitive model profile for [HAM SANDWICH] (modified from Evans 2009a)

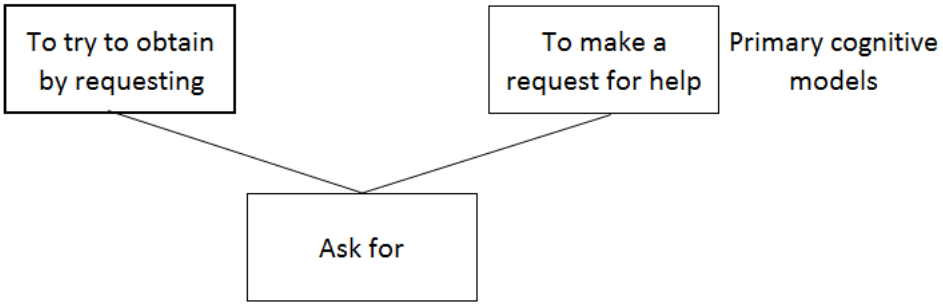


Figure 4.38 Partial cognitive model profile for [ASK FOR]

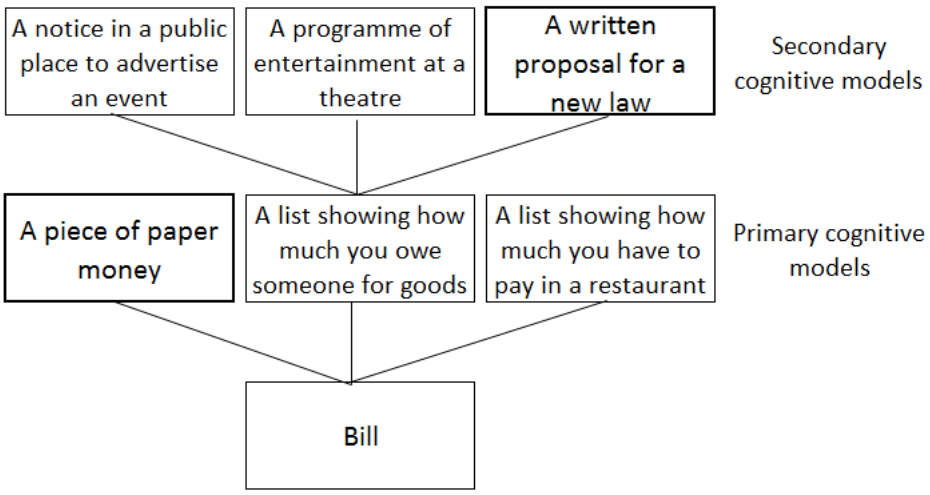


Figure 4.39 Partial cognitive model profile for [BILL]

4.3.5 Summary of Analysis

As shown above, metonymic expressions include a number of different types of expressions and are spread out across a wide range of conceptual levels. This chapter has defined metonymic expressions on at least three conceptual levels: non-figurative metonymy, figurative metonymy and higher figurative metonymy.

The literal expressions discussed in this section are slightly different from those in the accounts of the LCCM theory. 'Literal' refers to the original or central meaning of a word, which is known as a primary concept and conveys conventional, generic, intrinsic or unique information. Lexical concepts often have more than one primary concept, as shown in the examples above. The issue with literal expressions here is that linguistic vehicles access more than one primary cognitive model (e.g., physical attributes and abstract [functional] aspects), which cover a range of the primary cognitive area. This type of matching can include more potential targets that do not use the metonymic cognitive structure of one entity describing another entity in the same concept. Instead, they have A WHOLE FOR THE WHOLE conceptual relationship. This is different from non-figurative metonymies.

Non-metonymic expressions might seem like literal expressions, but once we deeply observe the process of understanding non-figurative metonymies, there is a slight semantic gap between the vehicle and target. As shown earlier, a non-figurative metonymic vehicle facilitates

access to a primary cognitive model and highlights its attribute. Since a primary cognitive level is an access site, figurativity does not arise in the process as a result. However, there is a slight semantic gap between the vehicle and target because the vehicle matches with one of the attributes in the primary cognitive model profile. This means that these expressions still include the metonymic cognitive structure. Therefore, these are called non-figurative metonymies.

Figurative metonymy includes a metonymic cognitive structure and figurativity. A figurative metonymic vehicle facilitates access to a secondary cognitive level. A secondary cognitive model conveys unconventional, abnormal, extrinsic and/or unique knowledge and is relatively independent of the central meaning of its lexical concept. In other words, the access route between the vehicle and target is longer than in literal and non-figurative expressions.

In a similar way, higher figurative expressions include a metonymic cognitive structure and figurativity that has a higher figurative concept than in figurative metonymies. A figurative metonymic vehicle facilitates access to a higher secondary cognitive, which means that is a semantic gap between an original and its peripheral meanings. This means that the target is conceptually far from the central meaning, and the access route between the vehicle and target is longer than in non-figurative and figurative metonymies.

In sum, there is a conceptual gradation in metonymic expressions, which differs depending on the access route length. Non-figurative metonymies are close to literal expressions but still have metonymic cognitive structure. Higher figurative metonymies are close to metaphorical expressions, in which the two entities are independent but loosely bonded with each other. The two entities are normally different concepts, but the two in a higher figurative metonymy associate with each other as in a single concept. The following table summarises the conceptual gradation of the analysis.

Table 4.1 Gradation of literal and metonymic expressions in the LCCM framework

Literalness	Metonymy		
Primary cognitive level	Primary cognitive level	Secondary cognitive level	Higher secondary cognitive level
(106) I bought a car	(107) I washed a car	(53) They wold have to wait until the school broke up	(98) The ham sandwich asked for a bill
(108) I borrowed a book	(33) This book is very large	(20) Time took over Sunset magazine, and it's gone downhill ever since	
	(34) This book is a history of Iraq	(54) The Crown has not withheld its assent to Bill since 1707	
	(116) I vacuum a car	(119) The kettle is boiling	
	(117) I fill a car	(120) She bought Shakespeare	
	(118) He paint the door and walk through it	(121) We need more hands	
	(19) Time magazine is pretty vapid		

This chapter would like to show that there is some connection between literal and metonymic expressions. I could systematically show this gradation by using the LCCM framework. Metonymy has linkage between source and target as a metonymic structure in a single cognitive model profile. This should be a metonymic motivation. Even though the figurativity is higher— that is, a figurative vehicle accesses a higher secondary cognitive model—there is still a metonymic link, and, therefore, the metonymic operation occurs in a single concept.

4.4 Conventional Metonymic Expressions and Their Access Paths

The previous section has examined how the LCCM framework is applied to different types of metonymic expressions. So far, this chapter has shown the general conceptual gradation between literal and metonymic expressions. Apart from this, this section considers further discussion, such as the possibility of interpreting conventionalised metonymic expressions based on the LCCM theory. In the traditional theories, most researchers agree that metonymic patterns are established in our minds, such as PRODUCER FOR PRODUCT, OBJECT

USED FOR USER and CONTROLLER FOR CONTROLLED (Lakoff and Johnson 1980). In addition, Langacker (1991, 1993) claims that metonymies are mainly governed by three types of cognitive principles: (i) human experience, (ii) perceptual selectivity and (iii) cultural preferences (see Chapter 2 for more detail). However, not all researchers show how these patterns and principles work in actual understanding processes of metonymic expressions. That is, how metonymic patterns and principles work in conventionalised metonymic expressions. This section challenges to answer this question.

I approach this difficult question based on some psychological studies (Gibbs 1993, Giora 1990) that show that literal expressions can be understood faster than figurative expressions, but if an expression is conventionalised or has salience in matching, regardless of whether it is literal or figurative, it can be understood faster than or as fast as a literal expression. In addition, as mentioned in Chapter 3, conceptual metaphors work in the LCCM theory (see Chapter 3 for more detail), which is located in the primary cognitive level. Conceptual metaphors help match figurative vehicles and targets in the understanding process. I apply these two notions to answering this question. Considering the metonymic linkage between source (vehicle) and target, the metonymic conceptual relationship is often established because of conventionalisation and salience. These relationships are often repeated in everyday language and then become a kind of principle for connecting a metonymic vehicle and its target. This conceptual connection is unique and enriches our minds. This notion of a special metonymic path is also logically compatible with some psychological approaches (e.g., Gibb 1993; Giora 1990). Some conventionalised expressions can sometimes be understood faster than literal expressions. Given these notions, reconsider the following conventionalised examples:

(119) The *kettle* is boiling (Lakoff & Johnson 1980)

(120) She bought *Shakespeare* (Lakoff & Johnson 1980)

Example (119), 'The *kettle* is boiling', is a well-known metonymic expression that uses the conceptual relationship CONTAINER FOR CONTENT, which has been established as an access path in the cognitive model profile 'kettle'. This is because individuals know and have experienced that the action of 'boiling' is always related to liquid, and the content in a kettle is normally liquid (water). In addition, a situation in which a body of a kettle is boiling (or melting) rarely happens in the real world. That is to say, individuals naturally avoid a semantically inconsistent meaning and find another way to connect a vehicle and target. As a result, this is a very common

and conventional expression since people are used to hearing it in everyday conversation, and the conceptual relationship CONTAINER FOR CONTENT has become a compressed concept in the cognitive model profile. Therefore, like a conceptual metaphor, the conceptual relationship CONTAINER FOR CONTENT is in a special cognitive model; by undergoing or accessing that conceptual model in some way, at the same time, the figurative vehicle [KETTLE] facilitates access to the secondary cognitive model WATER. Therefore, this can be defined as a conventionalised metonymic expression.

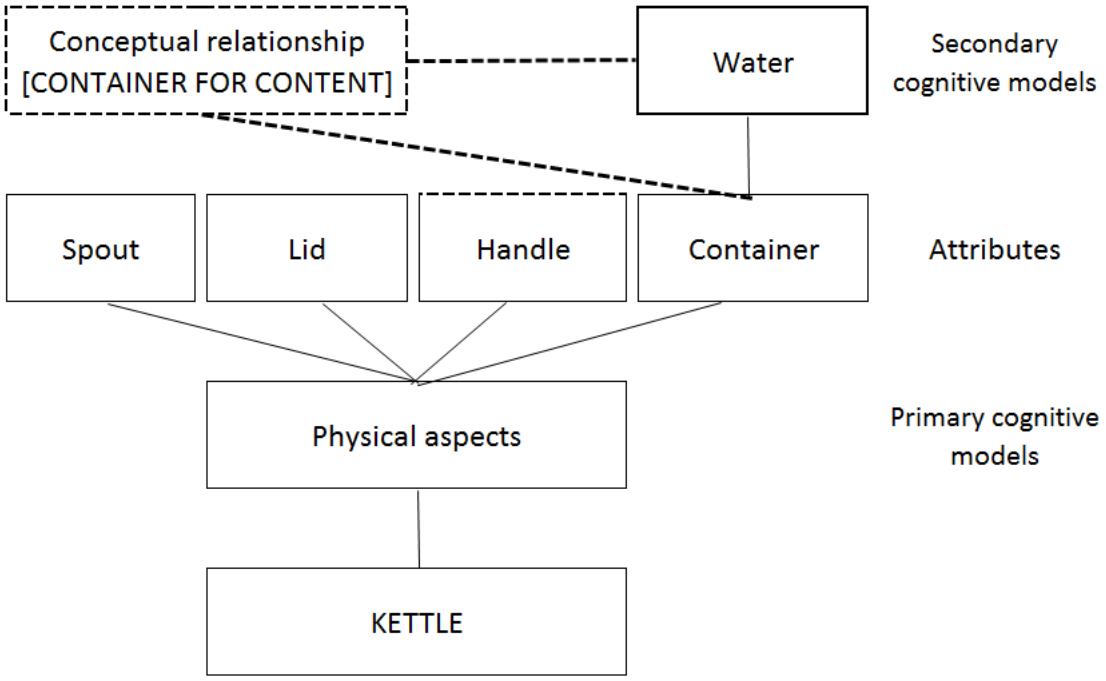


Figure 4.40 Example of partial cognitive model profile for [KETTLE] with the conceptual relationship [CONTAINER FOR CONTENT]

Figure 4.39 follows the conceptual metaphors working in the LCCM theory (see Chapter 3 for more detail). The conceptual relationship 'container for content' helps access 'kettle' and 'water' in some way, even though the access site has not been changed (secondary cognitive model). However, how the conceptual relationship associates with the figurative vehicle and target has not been investigated. I assume that the access path can be changed, established from an ordinary path or omitted in some parts of the access route in our understanding processes. As a result, individuals can understand these kinds of expressions as

fast as literal expressions. This is compatible with the LCCM theory and with psychological studies on understanding speed (e.g., Gibbs 1993; Giora 1990).

The next example, (120), 'She bought *Shakespeare*', can be understood in the same way. This is also a popular metonymic expression. Shakespeare was a man but is also recognised as a famous playwright. He passed away a long time ago, but his works still exist, and his plays are still very popular. The conceptual relationship between 'Shakespeare' and 'his work' has recurred many times in our conversations and has been conceptualised in our minds. The figurative vehicle [SHAKESPEARE] accesses the secondary cognitive model 'his works', but undergoing the conceptual relationship PRODUCER FOR PRODUCT, the figurative vehicle somehow directly accesses the target in the secondary cognitive model. As a result, this example can be understood faster than figurative expressions or as fast as literal expressions.

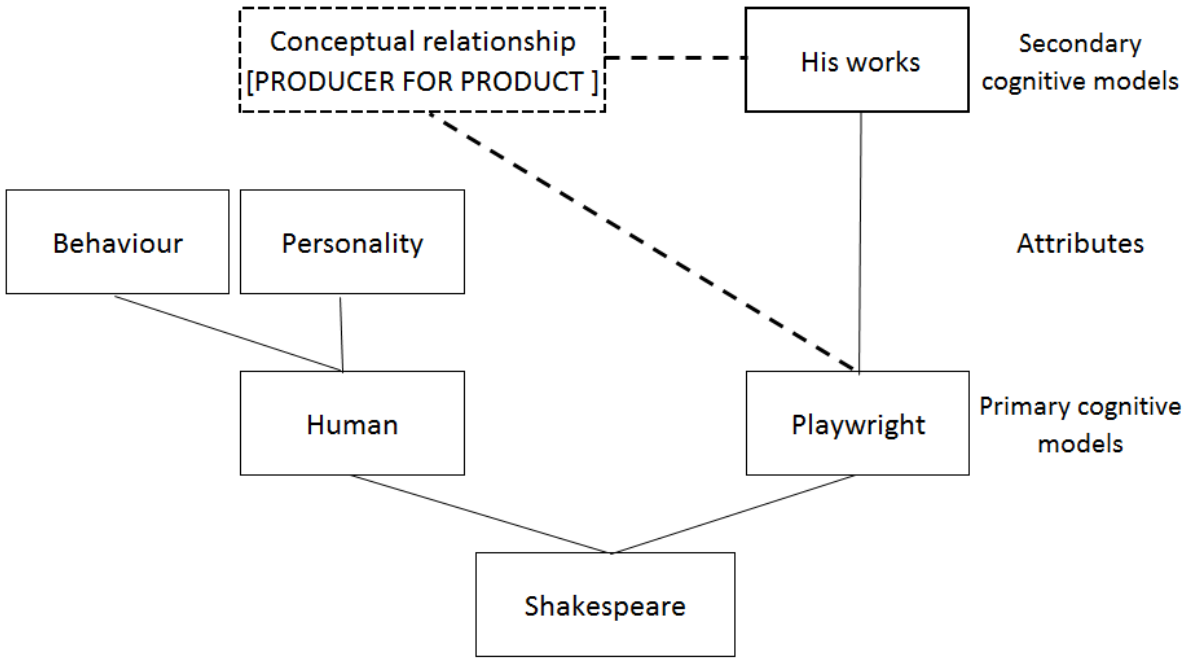


Figure 4.41 Example of partial cognitive model profile with the conceptual relationship [PRODUCER FOR PRODUCT]

Considering the access speed is not the main purpose of this thesis, but based on the LCCM theory and other psychological studies shown, it can be assumed that the metonymic path can be changed in some way if a given expression has been conventionalised. This is also related to the level of figurativity. By establishing the conceptual metonymic structure, the

metonymic vehicle can access the figurative target directly. As a result, the figurativity can disappear. This might be the reason individuals cannot feel the figurativity in figurative expressions.

The above figures are examples of the understanding process of metonymic expressions following the LCCM theory and some psychological studies, which show that conventionalised figurative expressions can be understood faster than literal expressions or as fast as literal expressions. Therefore, this is a convincing possibility for meaning construction for understanding conventionalised metonymic expressions.

4.5 Summary

This chapter has addressed the question of whether metonymy is, in fact, a unified phenomenon and how metonymies are motivated. I have attempted to define different types of metonymic expressions, including those that are close to literal and metaphoric expressions, as a unified phenomenon by using a single symptom (the LCCM framework). Several scholars (e.g., Barnden 2010; Dirven 2002; Radden 2002) suggest that literal, metonymic and metaphorical expressions (or metonymies and metaphors) are not independent phenomena, but that they are somehow connected to each other. They also show that there are different types of expressions that cannot be clearly identified as either literal or metonymy. This chapter has clarified and defined what literalness and metonymy are and has shown the gradation from literal to metonymic expressions. As a result, the chapter has borne out the previous studies by showing cognitive models.

The analysis of literal expressions shows that there are two types of expressions that do not include figurativity. Generally, as the LCCM theory suggests, literal vehicles provide access to one primary cognitive model; this means that the vehicles receive a literal meaning, since a primary cognitive model holds the central meaning of a given concept. I call this non-figurative metonymy. In the literature this type of expressions are called pre-metonymy. However, this study suggests that literal vehicles sometimes access more than one primary cognitive model such as physical aspects and abstract (functional) aspects, which means that the vehicles cover most of the primary cognitive area (e.g. ‘I bought a *car*’). In other words, there is no semantic affordance between a vehicle and a target. As a result, the semantic gap, or figurativity, is zero.

This is new notion from this thesis. However, there are indeed different types of literalness but I need more support to insist on it. Thus, this is not widely an accepted type of literalness, but it is a potential expansion of the access route in the LCCM literature. I potentially assume that individuals can access more than one cognitive model in a cognitive model profile in a certain expression like the above examples show. I do not discuss this notion in this thesis further but note it for future research.

The analysis shows that there are three levels of metonymic expressions: i) non-figurative metonymy, ii) figurative metonymy and iii) higher figurative metonymy. As mentioned above, non-figurative metonymy does not have figurativity and can also be called a literal expression. However, in this thesis, I categorise non-figurative metonymy as metonymy since it still holds a metonymic cognitive structure such as A PART FOR WHOLE/WHOLE FOR THE PART (e.g. 'I vacuumed a *car*'). In this case, the lexical concept of 'car' accesses one attribute in the primary cognitive model 'interior of car'. That expression does not have figurativity since the vehicle directly accesses the primary cognitive model that holds the primary meaning, but the vehicle refers to a part of the whole car, which has a metonymic cognitive structure; therefore, this is also metonymic. In this type of expression, a vehicle accesses a point in the primary cognitive model or highlights one attribute in a primary cognitive model.

The next type of metonymy is figurative metonymy, in which a lexical concept accesses a secondary cognitive model (e.g., '*Time Magazine* is pretty vapid'). In this case, figurative metonymies have a longer conceptual distance than non-figurative metonymies. A vehicle facilitates access to a target in a secondary cognitive model, which holds a more peripheral meaning and tends to be more independent than the one in the primary cognitive model. Therefore, figurative metonymy holds a meaning that is farther from the original meaning than in non-figurative metonymy.

The final type is higher figurative metonymy, in which a lexical concept affords access to a higher secondary cognitive model and, as a result, receives higher figurativity (e.g. 'The *ham sandwich* has asked for the bill'). Higher figurative metonymy includes a great conceptual gap between the vehicle and target, in which the vehicle facilitates access to a higher secondary cognitive model. In this operation, the two entities (e.g., 'ham sandwich' and 'customer') are independent of each other, since the two are categorised in different domains. In these terms, the tie between the vehicle and target is not so entrenched, since a stable conceptual relationship cannot be established. In other words, the two entities are not a common pair conceptually in

our minds. However, the two entities radically press into a single concept of 'ham sandwich', since the perceptual connection, scene or situation (non-linguistic information) emerges to help associate them with each other. As a result, the two concepts are forced to connect with each other in one concept (ham sandwich) and the linkage is established between a vehicle and target, which leads a metonymic cognitive structure. Since there are two different concepts in one operation, the access route is longer than usual, accessing higher secondary cognitive model. Thus, the level of figurativity is higher.

Most figurative expressions have been conventionalised by being used repeatedly and stored as concepts in our minds. For example, it seems that 'The *kettle* is boiling' or 'She bought *Shakespeare'* are not different from literal expressions. However, their access points are still the same as when these expressions arose. Since the relationship between primary and secondary cognitive models is not easily changed in encyclopaedic knowledge, the access point in the encyclopaedic knowledge has not changed as well. That is to say, it does not mean that the access point or target has changed within the cognitive model. So why do we feel these expressions are very similar to literal expressions? This is because another cognitive route has been established between a given vehicle and the target in cognitive model profiles. As a result, the conceptual path is somehow changed, such as being shorter than the original, or some of the path has been omitted; as a result, it is assumed that vehicles can directly access targets. In these terms, individuals feel conventional figurative expressions the same way as literal expressions.

This chapter has also considered how and where metonymic motivation arises and has shown that the meaning construction of metonymic expressions and, as a result, metonymic motivation is related to the *interpretation* process. In the LCCM framework, *co-selection* is an operation that selects the most appropriate lexical concept associated with a given form, which relies upon both linguistic and non-linguistic features. In addition, the *interpretation* process is also important in deciding the direction of metonymic vehicles, which is affected by other lexical concepts in a sentence to produce a metonymic sentence meaning. On the other hand, literal expressions relying upon the operation of 'lexical concept selection' in the LCCM framework is also important. Lexical concepts in literal expressions access the primary cognitive model, which leads them to a target. Therefore, even though literal and metonymic expressions use the same understanding process, they tend to depend on different operations in the LCCM framework.

Finally, the present study finds a new perspective (different levels of figurativity) for treating literal and metonymic expressions by observing how linguistic vehicles access targets in conceptual knowledge. This new notion of literalness and the process of conventionalisation of metonymic expressions are ongoing research, which still needs further study. However, this is an acceptable and plausible notion that supports the LCCM theory and other psychological approaches. The next chapter uses this symptom to understand metaphorical expressions.

Chapter 5

Bridge between Metonymy and Metaphor

5.1 Introduction

The previous chapter re-analyses metonymy and its compositionality by using the access-route length between a vehicle and a target within the LCCM framework (e.g., Evans 2006b, 2009a, 2010). The analysis reveals that one measurement (access-route length) can account for prototypical metonymic expressions and other types of metonymies. As discussed, metonymic expressions cannot be identified because they have specific functions such as referentiality and contiguity. To study this further, this chapter focusses on the relationship between metonymy and metaphor. In particular, it concentrates on the conceptual closeness and construction of the two phenomena. Some researchers claim that metonymy and metaphor are independent phenomena (Croft 1993; Langacker 1995; Radden and Kövecses 1998, 1999). However, some types of figurative expressions are not clearly identified as either metaphor or metonymy or are in some sense in between (Barnden 2010; Barcelona 2010; Dirvern 1993; Goossens 1990; Radden 2002; Ruiz de Mendoza Ibáñez and Díez Velasco 2002; Warren 2006). In other words, the border between the two phenomena has not yet been clarified in the literature. This chapter re-analyses these 'borderline' figurative expressions and compares points with proper metonymies and metaphors.

The previous chapter examines the access path between figurative source (vehicle) and target in a single domain, which leads the level of figurativity in the metonymic expressions. However, metaphor is different from metonymic expression, as metaphorical expressions occurs across distinct domains. Meaning construction is more complicated than metonymic operation; even the mix of metaphor and metonymy can be more complicated. Therefore, unlike the previous chapter, this chapter focuses on meaning construction as well as the level of figurativity.

This chapter discusses the following question: How is metonymy related to other figurative expressions, such as metaphor? This chapter contributes to the further development of both metonymic and metaphorical understanding and discusses how the two phenomena are related and how they exist in a conceptual continuum. Specifically, this chapter provides an

analysis of the relationship between metonymy and metaphor. It places the analysis in the LCCM framework (e.g., Evans 2006b, 2009a, 2010), which is a protean approach to meaning composition and construction. In addition, the notion of metaphor as double metonymy (Group μ 1981), which forms the idea, is that there is a metonymic path from the metaphor's source to some conceptual item X from which there is a metonymic path to the metonymy's target.

This chapter adopts the notion of LCCM theory and metaphor as double metonymy, incorporating into the analysis Barnden's (2010) notion of a meaning continuum as a multidimensional space and other researchers' (e.g., Goossens 1990) notion of interaction between metaphor and metonymy. These authors use linguistic examples as evidence of the interaction between metaphor and metonymy and examine how source (vehicle) and target connect and what kinds of linkages are established. Bringing together the notions of LCCM theory (e.g., Evans 2006b, 2009a, 2010) and of metaphor as double metonymy (Group μ 1981), Barnden's and Goossens's works provide a systematic account of the interaction between metaphor and metonymy and investigate more details of the linkage between source (vehicle) and target. As a result, this chapter provides a single unified account of figurative expressions that shows a continuum between the two phenomena at conceptual levels.

Before we begin the analysis, recall the notion of intermediacy between metaphor and metonymy. As shown in Chapter 2, some cases are intermediate between metonymy and metaphor, just as the notion of a continuum might make one think: i.e., there are cases that have some but not all of the required features of metonymy and also some but not all of the required features of metaphor, and there are borderline cases that are fully both metonymic and metaphoric. Some cases qualify as being both metaphor and metonymy. This type of phenomena called the overlap of metonymy and metaphor. The other type of interaction consists of some combination of metaphor and metonymy that have been discussed as metaphor within metonymy, metonymy within metaphor, and chains of metaphor and metonymy (see Chapter 2 for more details) (e.g., Goossens 1990; Ruiz de Mendoza and Déz Velasco 2002; Warren 2006).For example, a given conceptual item A links to another conceptual item X and X links to B. The former link can be metaphorical and the latter can be metonymic, or vice versa.

The structure of the remainder of this chapter is as follows. Section 2 briefly describes the issues in the relationship between metaphor and metonymy and discusses expressions in the existing literature that can be understood as either metaphor or metonymy. Section 3 considers

the differences between metaphor and metonymy within the LCCM framework. Section 4 examines and adjusts the LCCM model in light of controversial examples. Sections 5 concludes that there is a relationship between metaphor and metonymy with figurative gradation within the LCCM framework that can provide an analysis of a unified account of different types of figurative expressions.

5.2 Issues

There are a number of arguments regarding the relationship between metonymies and metaphors in the literature. Some previous researchers (e.g., Lakoff & Johnson 1980) have discussed metonymies and metaphors as independent notions that are not connected to each other. However, it has recently been found that metonymy and metaphor lie along a continuum. This discovery reveals that metonymies and metaphors are not independent but that there is instead a relationship between the two (e.g., Barnden 2010; Barcelona 2010; Dirven1993). This implies that there are some figurative expressions that lie between the two phenomena. Some researchers (e.g., Barnden 2010; Goossens 1990; Kawakami 1996; Warren 1999) have shown different types of figurative expressions that cannot be identified as either metaphor or metonymy but are in between. However, there is no follow-up treatment of these expressions in the literature. To understand these expressions, this chapter places them in a theoretical framework. More precisely, this chapter considers the following issues.

First, this chapter makes sure that contiguity (referentiality) and similarity is not the unique feature of metaphor and metonymy. Recent researches also show that there are many examples that are not based on the features: contiguity (referentiality) and similarity. If metaphor and metonymy do not involve unique features, how are source (vehicle) and target connected? Second, this chapter accounts for figurative and 'borderline' expressions systematically since there are many different types of figurative expressions that are examined only as individual cases in the literature. Third, this chapter concentrates on a meaning extension in each lexical concept in a given sentence because a combination of metaphor and metonymy in a sentence constitutes a very complicated construction, it is very difficult to reveal how to connect a metonymic and metaphorical linkages.

Based on these issues, this chapter re-analyses different types of figurative expressions that can be understood as both metonymies and metaphors or as in-between cases and reveals the process by which they are constructed in cognitive models. I observe how each sources and targets access its cognitive model and its access-route length. This chapter improves the theoretical framework of figurative expressions by offering a cognitive framework and interpretation of how individuals process a source (vehicle) and a target in conceptual knowledge.

I begin by analysing correlation metaphors (e.g., I see what you mean). Many researchers claim that correlation metaphor is grounded in correlated experience. It can be said that correlation metaphor is generated from the metonymic stage. From another perspective, what correlation means? If two concepts are correlated, it means that there is some conceptual similarity or contiguity between them that connects the two different concepts. Therefore, correlation metaphors do not simply belong to correlated experience but also involve some similarities between them. I examine this point in the following section.

Referential metaphors (e.g., The creampuff didn't even show up) include a function of referentiality that is a sign of metonymy in traditional studies. This section ensures that referentiality is not a unique feature of metonymy but is also used in metaphorical expressions. In addition, I consider how the connection of referentiality arises. As with correlation metaphors, the notion of referentiality arises based on some conceptual similarities or contiguities.

A family-inherited metaphor (e.g., Ann has her mother's eyes [eyes like those of her mother]), includes both a metonymic function of contiguity and a metaphorical function of similarity. Ann and her mother have physical resemblances, but this is not a product of chance; it is deeply related to their blood relationship, which implies that the similarity is derived from a conceptual closeness behind the scene. Therefore, an approach that relies on similarity and contiguity to distinguish between metaphor and metonymy does not work on this expression. I consider a special access path in this example.

A figurative expression that includes a speaker's intention (e.g., There's a snake on the left-hand side of the drawing) can be understood as both metaphor and metonymy. Though the two lexical concepts are the same, they can be understood as one concept in the former case and as different taxonomic concepts in the latter case. I use cognitive models to demonstrate the distinct understanding process in a single sentence.

Goossens (1990) claims that some figurative expressions qualify as either metaphor or metonymy, which means that there is some continuum between them. He cites examples of metaphtonymy as evidence (e.g., "Oh dear", she giggled, "I'd quite forgotten") in an individual case. I analyse a meaning extension in each source and target concept, and I attempt to account for these expressions systematically by using the LCCM theory.

Examples of chaining metaphor and metonymy (e.g., Osho, which means the King in Japanese) (Kawakami 1996), are nicknames that include two-step referentiality—metaphor and metonymy—which means that metonymic and metaphorical referentiality occur twice in the understanding process in general. The understanding process of this combination of metaphor and metonymy has been discussed in the literature, but there is no unified account of it.

In short, I suggest that the above examples are inappropriate for demonstrating approaches that depend on similarity and contiguity or that these examples are individual cases that are not accounted for systematically in the literature. This chapter uses the LCCM framework to complement these issues. I briefly explain the LCCM theory and the notion of metaphor as double metonymy (Group μ 1981).

5.3 LCCM Framework and Metaphor as Double Metonymy

This section considers the idea of Group μ (1981) and the received view of metonymy-based metaphor and LCCM theory. Group μ claims that all metaphors are created by double metonymy, which must be established by metonymic relations between a starting term and an intermediary term and an intermediary term and a resulting term. Although many researchers disagree with Group μ's idea, the concept is acceptable. In particular, Group μ argues that there are two types of metaphor: (Sg + Sp) $\sum$ and (Sp + Sg) $\prod$. The LCCM frame work finds that the former type is very similar to resemblance metaphors. Each metaphorical source and target concept accesses the same or a similar cognitive model in each concept. Each cognitive model can play a role of an 'intermediary term (*I*)', according to Group μ (1981). Therefore, if each source and target concept extends its meaning within each concept, this is a metonymic operation, and if the result of metonymic operation in each concept involve the same or similar meaning, that case will be a resemblance metaphor. In this respect, that metaphors can be identified as a metaphor as double metonymy. The latter case is not metaphorical as it depends

merely on the polysemous word. Only the linguistic word is the same, and the meanings of the words are different. In this case, it is very difficult to make a metaphorical relationship between source and target.

This chapter considers the possibilities of metonymy through the idea of metaphor as double metonymy (Group μ 1981), and it considers types of metaphor from the perspective of the LCCM framework. Group μ (1981) claims that metaphor can be decomposed into metonymies (synecdoches) as a result, which can provide a foundation for all figurative expressions. As mentioned in this chapter, all metaphors cannot be decomposed into synecdoches; therefore, this claim is incorrect. However, I agree that metonymy can be a foundation of all figurative expressions. For example, people normally extend a meaning from an original meaning to a peripheral meaning within a concept. This is a metonymic relation. In this process, if they can find a shared word in two different concepts (words), they can match them with each other. This is a metaphorical relation. In addition, as we saw in the previous chapters, many figurative expressions cannot be clearly identified with either metaphor or metonymy. Some metaphorical expressions depend on metonymic expressions. That is, it is possible to say that metonymy can be a basic unit of meaning extension.

First, consider an example of a metaphor as double metonymy. According to Group μ, the following examples can be identified as metaphor as double metonymy.

(122) The girl is a birch (Group μ 1981)

(123) The widow is a boat (Group μ 1981)

In the first sentence, according to Group μ (1981), there must be an identical seme FLEXIBLE in the two different lexemes. In the LCCM framework, each lexical concept presented below [GIRL] and [BIRCH] extends its original meaning, and the source [GIRL] and the target concept [BIRCH] access the same cognitive model FLEXIBLE in cognitive model profile. Each accessed point of the cognitive model FLEXIBLE then guides metaphorical connection. In terms of this, there is a horizontal metaphorical link between both FLEXIBLE cognitive models. That is, each source and target concept involve metonymic operations and the accessed point shares the same cognitive model connected with each other, which is metaphorical operation. Since both source and target involve and activate the same cognitive model FLEXIBLE in each cognitive profile, this metaphorical expression can be called a resemblance metaphor.

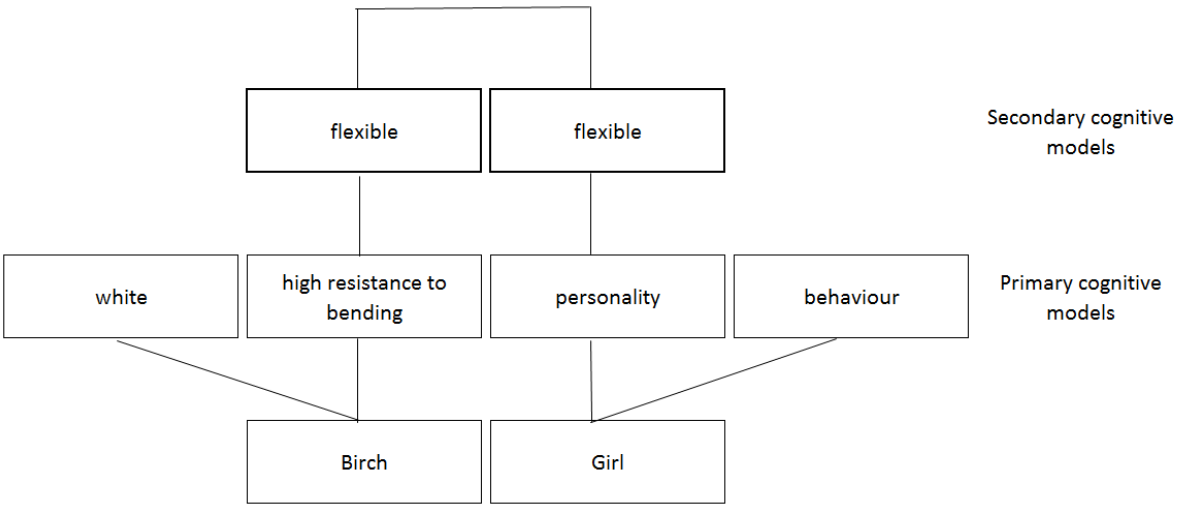


Figure 5.1 Partial cognitive model profile for [BIRCH] and [GIRL]

The next example is, 'The widow is a boat'. According to Group μ (1981), there must be an identical part in two different totalities: VEIL. This case is different from the above case. The intermediary term 'VEIL' is a polysemous word; therefore, the two VEILS in the cognitive model mean a different term: 'a garment that covers the face' in the [WIDOW] concept and 'sail' in the [BOAT] concept. However, as Group μ mentions, they can produce two metonymies—WIDOW and VEIL and VEIL and BOAT —but there is no metaphorical connection between [WIDOW] and [BOAT] in this case, like conceptual correlations, visible and invisible similarities and so on. Therefore, an expression of 'The widow is a boat' cannot be a metaphor in cognitive linguistics since the two concepts depend only on the polysemous word. Thus, the cognitive model is also incorrect. As a result, it seems that only the above case (The girl is a birch) can be identified properly as metaphor. The second example cannot be identified as metaphor in the LCCM theory but, as in the first example, the notion of metaphor as double metonymy can be taken into the comprehension process.

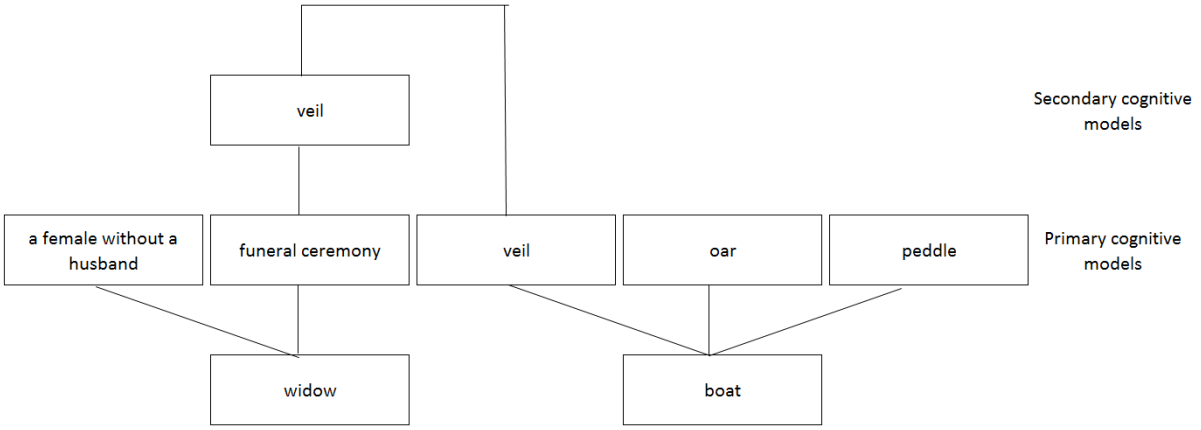


Figure 5.2 *Partial cognitive model profile for [WIDOW] and [BOAT][10]

Therefore, this chapter follows the notion of metaphor as double metonymy but more focuses on the meaning construction incorporating LCCM theory (e.g., Evans 2009a). From this perspective, metaphors consist of two metonymies, therefore metaphors have two distinct concepts that involve a metonymic operation respectively. In terms of this, metonymy has an alignment between a vehicle and target because metonymic operation occurs within a single concept, while metaphorical source and target are somehow independent from each other since both concept individually involve a metonymic operation and the two outcome of the metonymic operations match across concepts. As a result, metaphorical concept is created. Therefore, to examine meaning construction and the combination of metaphor and metonymy, and to examine further the linkage between source (vehicle) and target, I adopt the LCCM theory to systematically account for the level of figurativity (e.g., Evans 2006b, 2009a, 2010) and the notion of metaphor as double metonymy (Group μ 1981). Evans (e.g., Evans 2006b, 2009a, 2010) does not claim that the LCCM framework can support the idea of metaphor as double metonymy. However, I would say LCCM theory implies that metaphor is developed by metonymy since the LCCM models clearly show that metaphor consists from two metonymic models. For more details, consider the following examples. As shown in Chapter 3, the following example is a metonymic expression:

(98) The ham sandwich has asked for the bill (Evans 2010 [Lakoff & Johnson 1980])

[10] Asterisk mark means a wrong or controversial example.

Generally speaking, the lexical concept [HAM SANDWICH] is a food; as a result, it cannot ask for the bill because it is not an animate entity. The context indicates that 'the customer who ordered the ham sandwich has asked for the bill'.

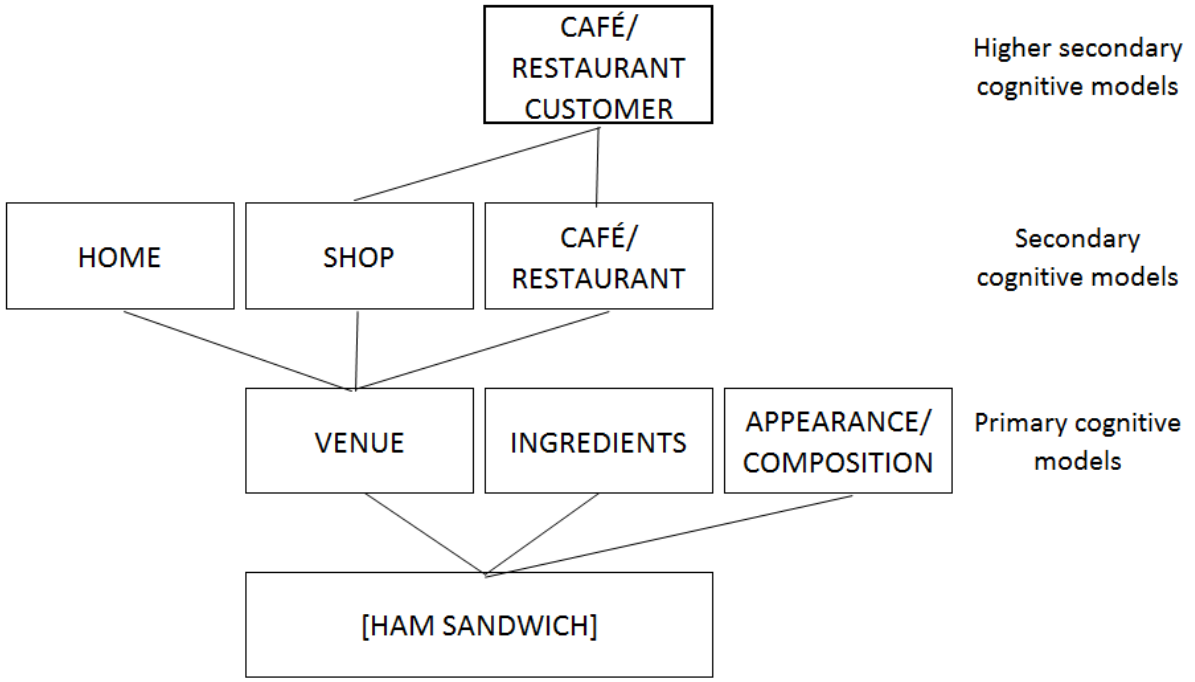


Figure 5.3 Partial cognitive models profile for [HAM SANDWICH] (modified from Evans 2010)

In the same way, individuals use 'the ham sandwich' for metonymic expressions such as, 'The ham sandwich has eaten the fish' and 'The ham sandwich started snarling', and 'The ham sandwich has wandering hands'. These cases can be identified as same as the Example (98). That is, 'The ham sandwich' refers to 'a customer' in a shop or restaurant. However, the next example is slightly different:

(124) The ham sandwich asked to be eaten

This expression can be identified as metaphor, and perhaps even better as a personification the goal of which is to create something unexpected that transfers some kind of 'agency' to a ham sandwich: 'The sandwich looked so delicious that I really wanted to eat it'. Individuals would expect the person who is about to eat it to be the agent who wants to eat that sandwich in a shop

or restaurant perhaps. But this transfer of agency makes it unusual; hence, the sentence may sound funny. That is, as a result of using the metaphorical transfer, the observing point has also been changed from 'the ham sandwich's eye' to 'the agent's eye'. There is indeed a metaphorical connection from a source domain (inanimate food) to the target domain, which would be a human person with the ability to think and ask to be eaten. In this case, the example can be identified as a higher secondary-level metaphorical expression, as the source [HAM SANDWICH] accesses a higher secondary cognitive model, CUSTOMER. Therefore, the metonymic operation occurs in both source and target concept and the accessed cognitive model, CUSTOMER, in the source and in 'human being who wants to eat the sandwich' match with each other. There is a similar notion that customer and a person who wants to eat arise in each concept and then connect with each other, which is a like connecting two different concepts.

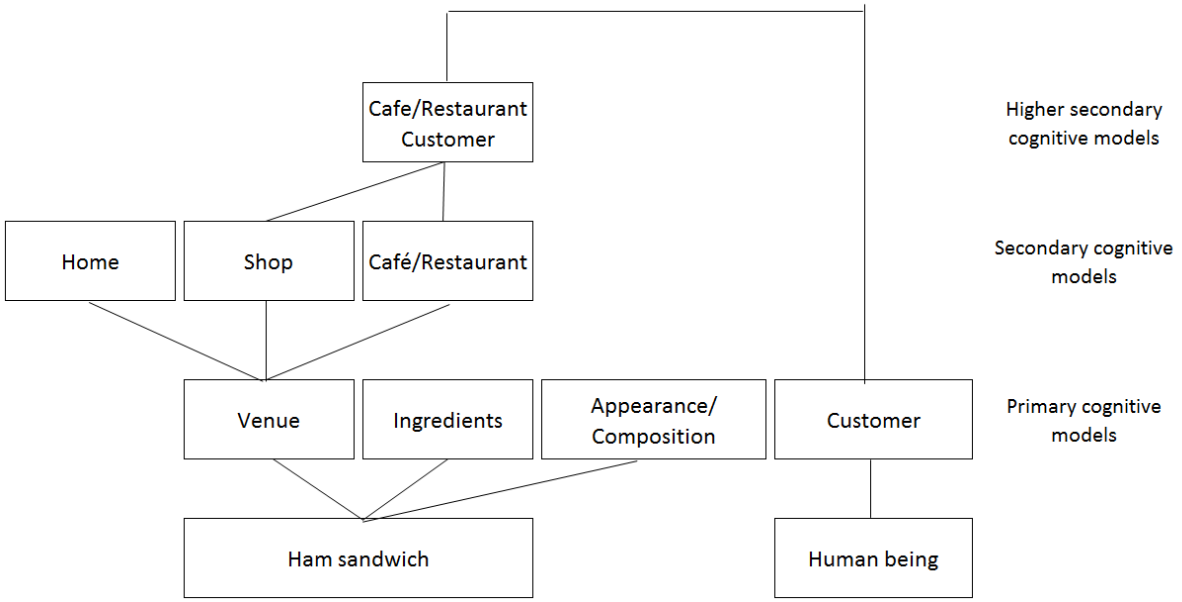


Figure 5.4 Partial cognitive models profile for [HAM SANDWICH] and [HUMAN BEING]

I now consider metaphorical examples:

(97) My boss is a pussycat (Evans 2010)

As shown in Chapter 3, the Example (97), 'My boss is a pussycat, is a metaphor. Generally speaking, a 'boss' is a human being who is in charge at work. A 'pussycat is an animal, a cat. Both [BOSS] and [PUSSYCAT] share the same features in this case: i.e., their BEHAVIOUR or

PERSONALITY is DOCILE. In this case, the metaphorical link, humans are animals, is applied to this expressions and the docility (personality or behaviour) is a point of connection based on the similarity that creates a metaphorical link between them. Therefore, as previous studies called so, this is identified as a resemblance metaphor.

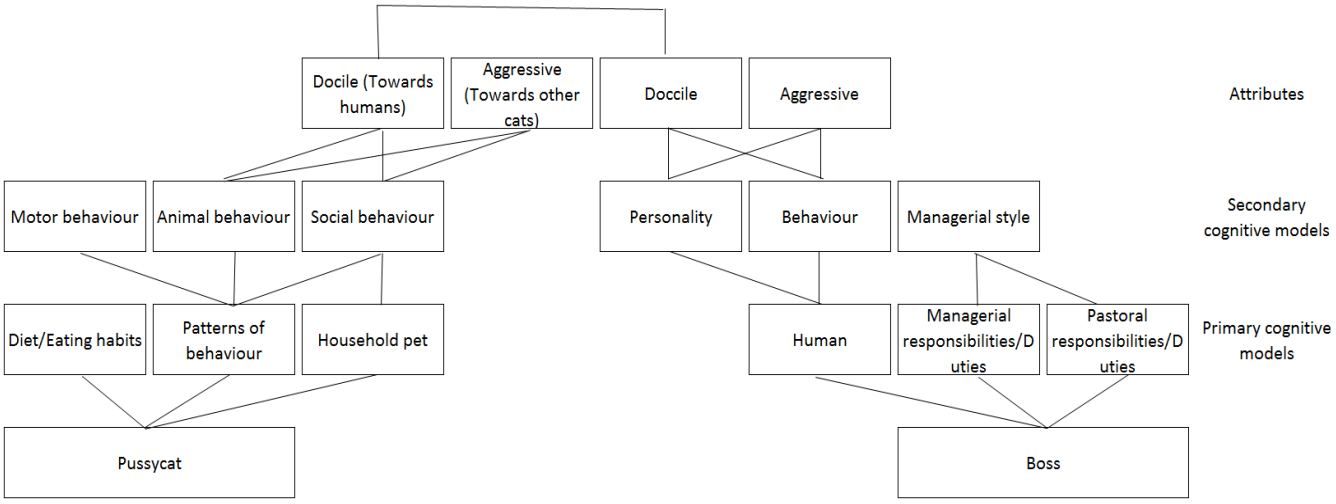


Figure 5.5 Partial cognitive model profiles for [BOSS] and [PUSSYCAT]

Also consider the following expressions:

(125) My boss purrs

(126) My boss meows

It would be unusual to interpret the first example literally, since the primary sense of purring is connected to being a cat. Hence, when individuals say something like this, 'we mean something more'. I say that this expressions involves metonymic connection: SOUND FOR PLEASURE. My boss is an animate entity and 'purrs is sound that cats make. Imagine a station that 'a staff success to make a contract with other companies, then the staff says that my boss purrs'. In this case, individuals can reach the interpretation, 'my boss is satisfied, by taking the following metonymic step: SOUND FOR PLEASURE. Look at the following figure. The figurative vehicle [PURR] is a sound that cats make, and it represents FEELING PLEASURE or SEXY VOICE, or is

applied to MACHINES THAT MAKE A SMOOTH SOUND, and so forth. In this case, the figurative vehicle accesses the secondary cognitive model, PLEASURE.

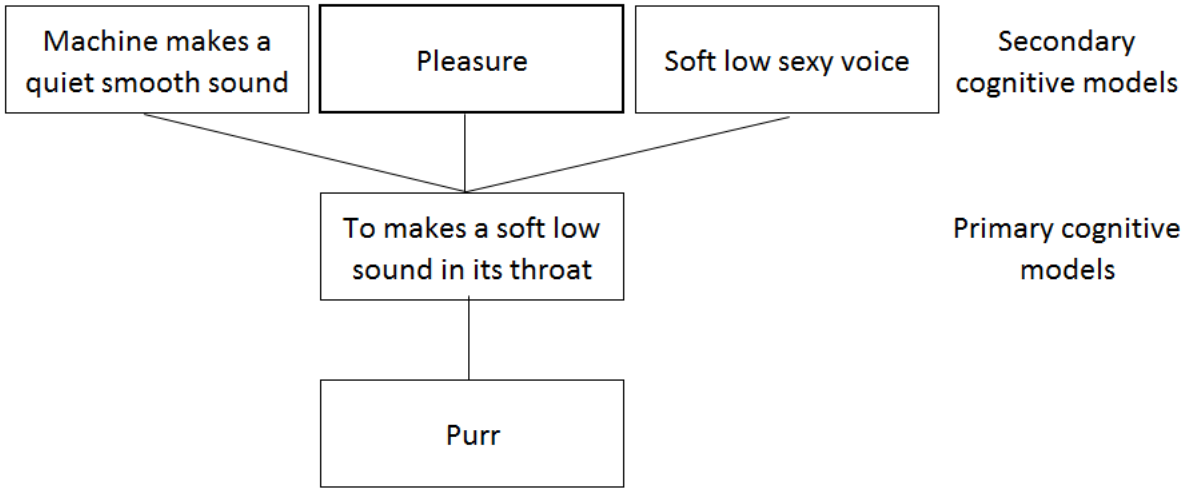


Figure 5.6 Partial cognitive model profiles for [PURR]

Example (126) can be identified as a figurative expression. This cannot be literal, because only a cat literally meows. Therefore, this example is some kind of figurative expression. For example, it is usually used when someone makes a snide remark: 'What an interesting dress", she meowed, "I had one like that last season". Or the word 'meow' expresses boredom or is used to tell someone to shut up in some situations. In this case, a figurative vehicle [MEOW] accesses a secondary cognitive model: e.g., TO MAKE SNIDE REMARKS or TO EXPRESS BOREDOM OR TO TELL SOMEONE TO SHUT UP.

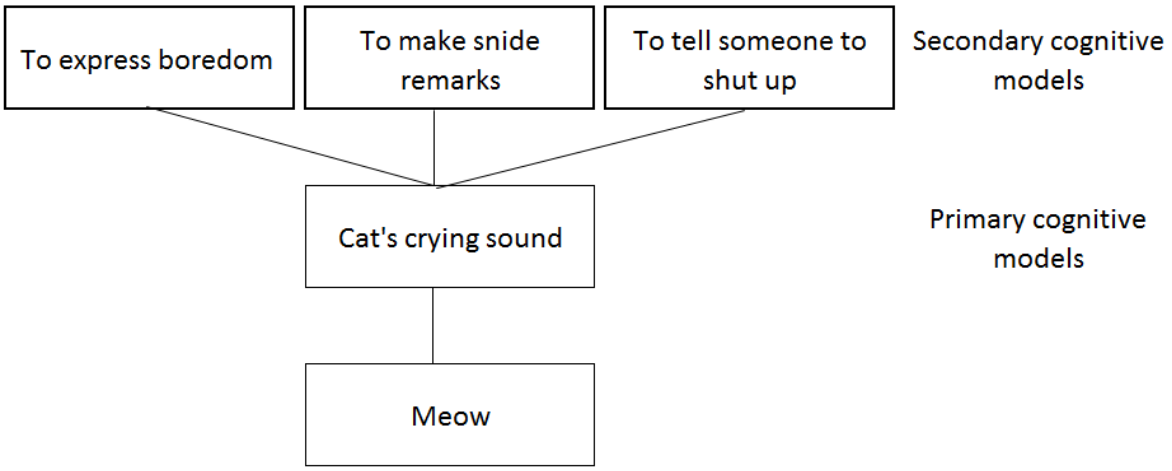


Figure 5.7 Partial cognitive model profiles for [MEOW]

However, look at the following figures 5.8 and 5.9, both expressions also involve metaphorical connection HUMANS ARE ANIMALS, as the words 'purr' and 'meow' are specified as cat sounds but the agent is 'my boss' (an animate entity) in this sentence. Therefore, the conceptual metaphor can also be applied to these sentences. Ultimately, both sentences can be identified as metonymy + metaphor expressions. In my judgment, this is a sort of overlap between metaphor and metonymy. As mentioned in Chapter 3, conceptual metaphor does not involve figurativity; therefore, in this sentence, the level of figurativity is based on these concepts, [PURR] and [MEOW].

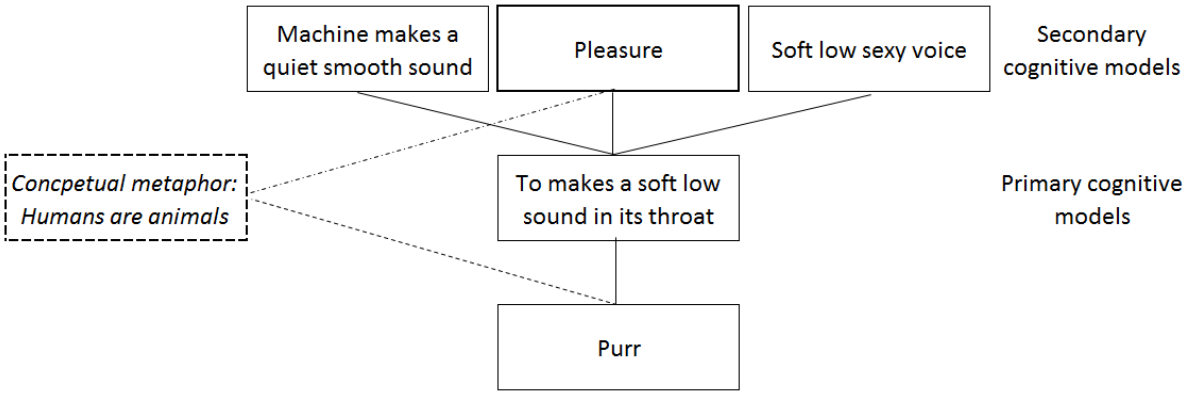


Figure 5.8 Partial cognitive model profiles for [PURR] with conceptual metaephor: [HUMANS ARE ANIMASL]

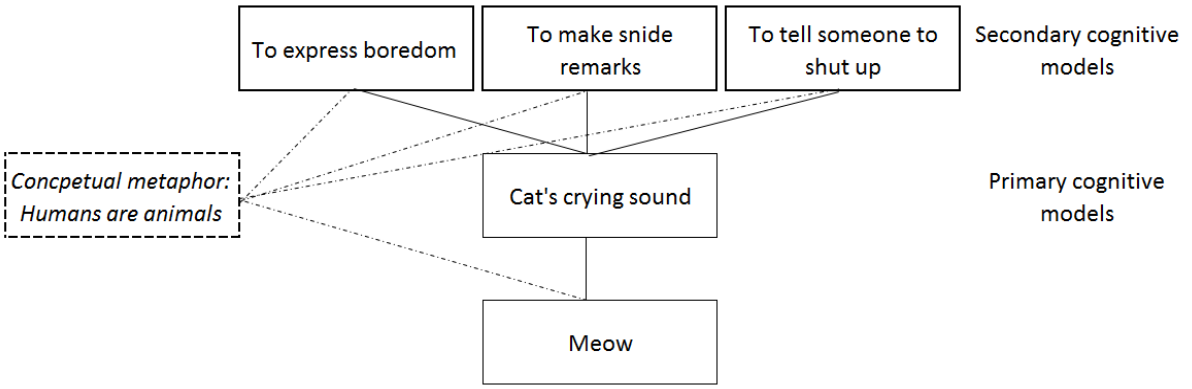


Figure 5.9 Partial cognitive model profiles for [MEOW] with conceptual metaphor: [HUMANS ARE ANIMALS]

As shown above, metonymic expressions have a metonymic operation within a single concept and an alignment can be found between figurative vehicle and target. Metaphorical expressions have more complicated operations than metonymic expressions. Two concepts are relatively independent from each other and possess metonymic operation in each concept. Two distinct concepts extend their meanings (metonymic extension) and then match with distinct concepts (metaphorical link). Sometimes both steps are mixed up in a sentence, which is called the interaction between metaphor and metonymy, as shown above.

Note that, since metonymy's operation occurs within a single concept, when we think about the gradation of figurativity between metaphor and metonymy, the figurativity is lower than in metaphorical expressions. This is because metaphorical expressions happen within two concepts: they have higher figurativity, though they reach the same cognitive level as metonymies.

Based on this mechanism, the next section re-analyses different types of expressions that cannot be identified as either metaphor or metonymy but are in between.

5.4 Analysis: Different Types of Figurative Expressions

This section addresses a range of different examples in the existing literature that are not defined as either metaphor or metonymy. The section then provides an LCCM analysis of

these—providing one theoretical architecture (the LCCM framework) that can account for all of them—and discusses their levels of figurativity. Consider these examples:

(127) I see what you mean [correlation metaphor] (C. Johnson 1997)

(128) Drunk driving arrests are up this year [correlation metaphor] (Grady 1993)

(39) Susan sank into a pit of sadness. She stayed at the bottom for many months [correlation metaphor] (Barnden 2010)

(38) The creampuff didn't even show up [Referential metaphor] (Gibbs 1990)

(36) Ann has her mother's [eyes like those of her mother] [Family-inherited metaphor] (Warren 1999)

(129) Ann has Audrey Hepburn's eyes

(120) She bought Shakespeare

(37) There's a snake on the left-hand side of the drawing [Either metaphor or metonymy] (Barnden 2010)

(40) "Oh dear", she giggled, "I'd quite forgotten" [Metaphor from metonymy] (Goossens 1990)

(41) I should/could bite my tongue off [Metonymy within metaphor] (Goossens 1990)

(42) Pay lip service [Demetonymization inside a metaphor] (Goossens 1990)

(130) Osho [Two-step referentiality] (Kawakami 1996)

(131) Pon [Two-step referentiality] (Kawakami 1996)

5.4.1 Correlation Metaphors

This section analyses correlation metaphors. Many researchers claim that correlation metaphors can be based on metonymy, since both concepts correlate with each other in our

experience. In terms of this, this is often called metonymy-based metaphors. For example, Barcelona (2000), C. Johnson (1997), Goossens (1990), Kövecses (1995) Lakoff (1987, 1990, 1993), Riemer (2001, 2002), Taylor (1995) and other researchers argue the metonymic motivation of metaphors. Consider the following correlation metaphors.

I see what you mean

C. Johnson (1997）, who is from the field of education, considers 'conflation' and 'differentiation as a situation in which, at a certain stage of development, children recognise one concept that actually includes two concepts and thereby come to interpret the one as having two meanings. Consider the following example: I *see* what you mean. This example is a correlation based metaphor because it is derived from KNOWING (UNDERSTANDING) IS SEEING based on the experiential correlation. In the case of KNOWING (UNDERSTANDING) is always understood through the perceptive experience of SEEING so that children recognise these two concepts as one. This is 'conflation'. Therefore, children do not use the expression, 'I see what you mean', because they cannot clearly divide the meaning of 'see', 'know' or 'understand'. However, as they grow up, children learn to divide both two concepts. This is 'differentiation'. Children become able to recognise one concept (KNOWING [SEEING]) as two concepts (KNOWING [UNDERSTANDING] and SEEING) as they develop. According to C. Johnson (1997), individuals induce the differentiation of one concept into two concepts. That is, people understand that both concepts, KNOWING/UNDERSTANDING and SEEING, co-occur, which can be a metonymic connection.

Now consider the metaphorical expression, 'I *see* what you mean', derived from the conceptual (primary) metaphor UNDERSTANDING IS SEEING. This is often called a correlation metaphor. In the literature, [SEEING] and [UNDERSTANDING] connect in our experience. The source [SEEING] metonymically connects with 'understanding and the metonymic concept maps onto the target [UNDERSTANDING]. That is, a concept [SEEING] co-occurs with a concept [UNDERSTANDING] in the metaphor. On the other hand, LCCM theory explains it slightly different. Look at the following figure.

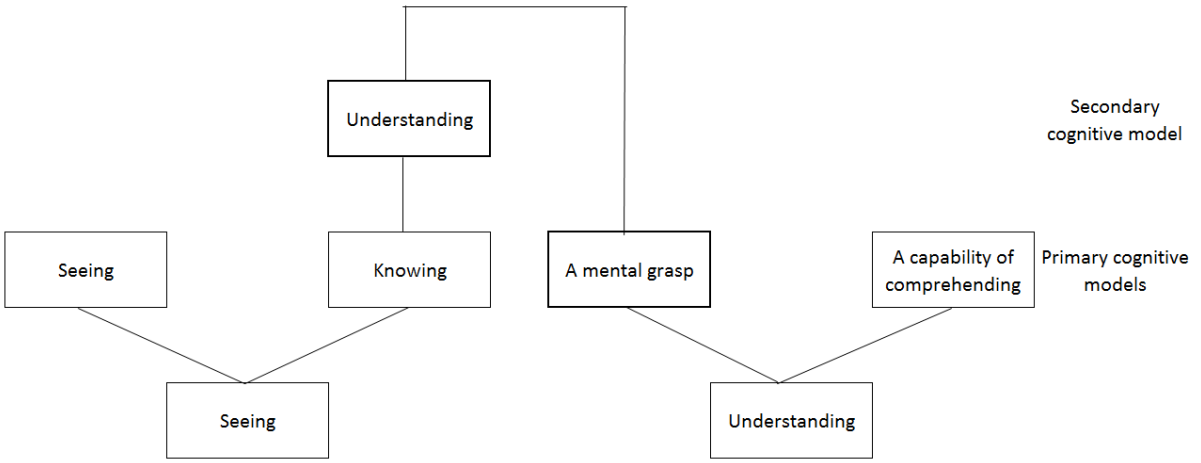


Figure 5.10 Partial cognitive model profile for [SEEING] and [UNDERSTANDING]

The figurative source [SEEING] accesses a secondary cognitive model UNDERSTANDING while the figurative target [UNDERSTANDING] accesses a primary cognitive model A MENTAL GRASP, which means that people mentally grasp ideas and opinions. The same or similar cognitive models appear in each cognitive model profile: UNDERSTANDING and A MENTAL GRASP. Both accessed points create a metaphorical connection to connect the two different concepts. Since the source concept accesses a secondary cognitive model, this is called a secondary-level metaphor in my thesis.

Drunk-driving arrests are up this year

Correlation metaphors, for example involving MORE IS UP, are based on experiential motivation, in which a source is the origin of the target (Grady 1993). They involve two distinct concepts that are cognitively linked based on recurring types of experience. For example, vertical elevation and quantity are related to each other in many situations, and both concepts co-occur in our minds. But in fact, they are two very different parameters. Grady (1993) claims that,

> We often experience a sense of gratification as a consequence of arriving at a particular spatial location, but our means of determining location and our emotional capacity for feeling gratification are distinct, too. (Grady 1993:227)

Therefore, it means that even though two concepts are very different, they involve some metonymic operation in the understanding process. Consider the following example 'Drunk driving arrests are *up* this year', which is derived from the correlation metaphor, MORE IS UP. The word 'up' here means to increase quantity, not vertical elevation. However, the meaning of increasing quantity leads from the concept MORE IS UP, which remains in the concept of increasing quantity. The LCCM framework shows this below.

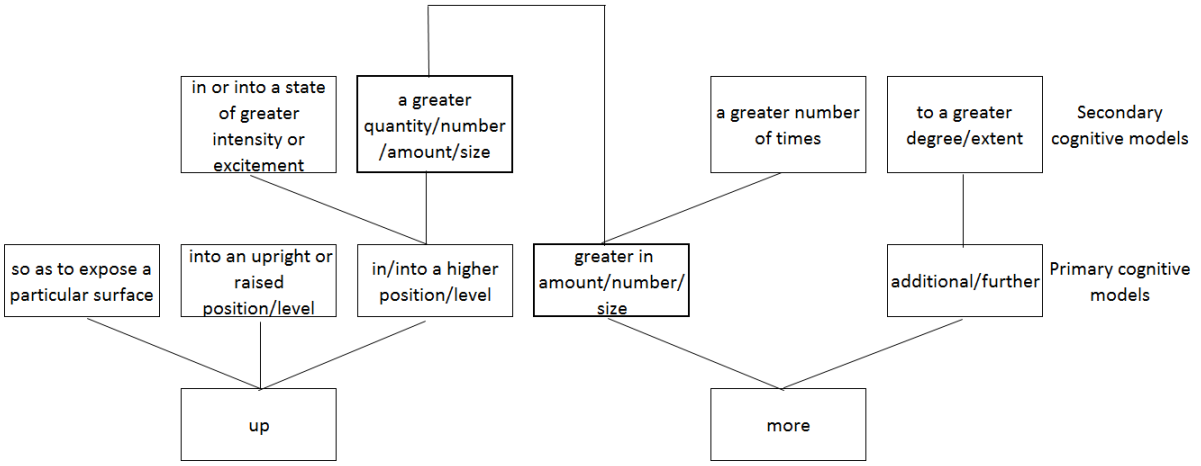


Figure 5.11 Partial cognitive model profile for [UP] and [MORE]

In this figure, the figurative source [UP] accesses a secondary cognitive model A GREATER QUANTITY/NUMBER/AMOUNT/SIZE, while the figurative target [MORE] accesses a primary cognitive model, GREATER IN AMOUNT/NUMBER/SIZE. Both concepts involve similar cognitive models: A GREATER QUALITY/NUMBER/AMOUNT/SIZE and GREATER IN NUMBER/AMOUNT/SIZE respectively. In this case, [UP] as source concept accesses a secondary cognitive model and [MORE] as a target concept accesses a primary cognitive model. Like the above example, MORE IS UP is a correlation metaphor, which means that the two different concepts correlate with each other in our experiences, but both concepts have A GREATER QUALITY/NUMBER/AMOUNT/SIZE and GREATER IN NUMBER/AMOUNT/SIZE and both accessed points create a metaphorical connection across the two different concepts. Since the source concept accesses a secondary cognitive model, this is called a second-level metaphor in this thesis.

She stayed at the bottom for many months

Consider the metaphor, SADNESS IS DOWN. At first glance, the sadness (cause) is connected to its typical behavioural effects, DOWNWARD-ORIENTED BODILY POSTURE. At this point, it is a typical metonymic connection, CAUSE AND EFFECT. Then, the DOWNWARD-ORIENTED BODILY POSTURE is metonymically understood as DOWNWARD SPATIAL ORIENTATION, since the most salient subdomain within that source domain is DOWNWARD SPATIAL ORIENTATION. Finally, the EFFECT-FOR-CAUSE metonymy produces spatial source domain DOWN, and they become the metaphor SAD IS DOWN. Thus, this generalisation between the source and target seems to remain constant (See Barcelona 2000). Barcelona states (2000) that,

> Some metaphors seem to develop out of a metonymy which encapsulates part of the experiential motivation of the mapping, through a process of generalisation, itself metonymic. Other metaphors […] seem to be motivated by a metonymic precomprehension of the target domain, which constrains the choice, both of the source and of the subdomain(s) of the latter to be mapped. (2000:52)

Therefore, according to Barcelona (2000) some metaphors clearly made from metonymy.

The expressions 'She stayed at the bottom for many months', 'John's head drooped sadly', and 'Mrs. Johnson's face fell on hearing sad news' are derived from the same metaphor, SADNESS IS DOWN (BOTTOMED). This is also called a correlation metaphor in the literature. The feeling of sadness is related to a downward bodily posture. For example, as briefly mentioned above, when people feel sad, their shoulders or head are down; that is, feeling sad and a downward bodily posture experientially co-occur; therefore, people can often use [DOWN] as [SADNESS]. Consider the first example, 'She stayed at the bottom for many months', in the LCCM framework.

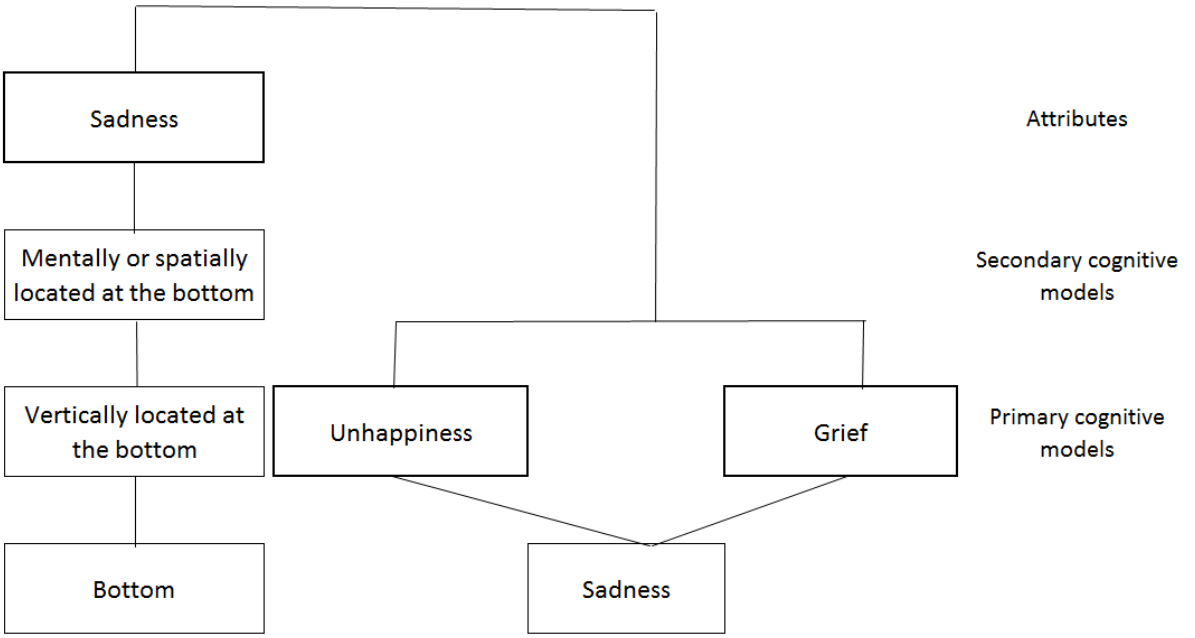


Figure 5.12 Partial cognitive model profile for [BOTTOM] and [SADNESS]

The figurative vehicle [BOTTOM] accesses an attribute in a secondary cognitive model SADNESS, while the figurative target [SADNESS] accesses a primary cognitive model, UNHAPPINESS. The two accessed cognitive models, SADNESS and UNHAPPINESS, are similar. As a result, the two accessed points create a metaphorical connection across the two distinct concepts. Since the source concept accesses an attribute in a secondary cognitive model, this is called a secondary-level metaphor in my thesis.

To sum up, many researchers claim that the two distinct concepts in correlation metaphors are based on experiential motivation, in this respect, the sources and targets in correlation metaphors are metonymically related to each other. The LCCM theory approaches in a relatively similar way, but correlation in the LCCM framework means source, and target concepts possess similar cognitive models. I assume that such similarity makes a correlation in our experience. Two concepts hold somehow similar or same entities, which mentally associated in our experiences. The similar point is sort of intermediary word to connect different concepts (Group μ 1981). Therefore, correlation metaphors share the similar (or the same) cognitive model in each source and target. Note that, as mentioned above, the LCCM framework in my thesis claims that metaphor is created by the two metonymic operations (in source and target). First, individuals find the metonymic link in each source and target concept.

Source and target concepts extend each meaning metonymically; then the two results of meaning create metaphorical connection across the two distinct concepts. In this respect, metaphor is created in the two metonymic operations (in source and target). Apart from traditional theories of correlation metaphor (including correlational motivation), this section shows that correlation metaphor involves similar cognitive models in each cognitive model profile, which leads to a metaphorical link between the two distinct concepts. In this respect, correlation metaphor can be identified as a sort of resemblance metaphor, as shown above (e.g., my boss is a pussy cat) in the LCCM framework.

5.4.2 Referential Metaphor

In the cognitive linguistics literature, some scholars claim that the function of referentiality is a symptom of metonymy but that some metaphorical expressions can also include it in what is called referential metaphor. That is, the referential function is used not just in metonymies but also in metaphors (e.g., Gibbs 1990, Barnden 2010). Consider the following referential metaphor: (130) 'The creampuff didn't even show up' (Gibbs 1994). In example, the word [CREAMPUFF] is a type of cake with a soft centre. Individuals interpret this sentence by understanding that the creampuff refers to a human being. 'The creampuff did not show up' implies that the softness of the cake is used metaphorically to indicate a psychological softness in humans. Physical softness and physical strength are used metaphorically for psychological strength; as a creampuff is physically weak, it refers to a human who is psychologically weak. Therefore, it can be said that a boxer who has a weak mind is a [CREAMPUFF] if the [BOXER] does not show up to a match.

Barnden (2010) states that a 'referential metaphor is said to occur when a definite noun phrase is used metaphorically to refer to some target item' (Barnden 2101:7). In other words, if there is a postulated, alleged contiguity link between the reference point (vehicle) and the reference object (target), and if the link is achieved in a single concept, the sentence is a metonymy. On the other hand, when the postulated similarity link is achieved in two different concepts, it is a referential metaphorical expression. I more or less agree with Barnden's opinion that both metonymies and metaphors can include the function of referentiality and, therefore, that referentiality is not only a metonymic function but can also be a metaphorical one. However, there is no existing framework for the way a lexical concept reaches an intended concept and

links a figurative vehicle and figurative target. The LCCM framework possibly complements this point.

In the LCCM framework, the figurative source [CREAMPUFF] and figurative target [BOXER] are allocated to different taxonomic concepts. The [CREAMPUFF] facilitates access to the secodary cognitive model, SOFT, while the [BOXER] accesses the secondary cognitive model, WEAK. Finally, the two different concepts are linked to each other at the secondary cognitive model through the same or similar concepts in the cognitive models, WEAK and SOFT. This is a metaphorical link between the distinct concepts. Each access route is longer than in a primary cognitive model. As a result, Example (38) is a second-level metaphor.

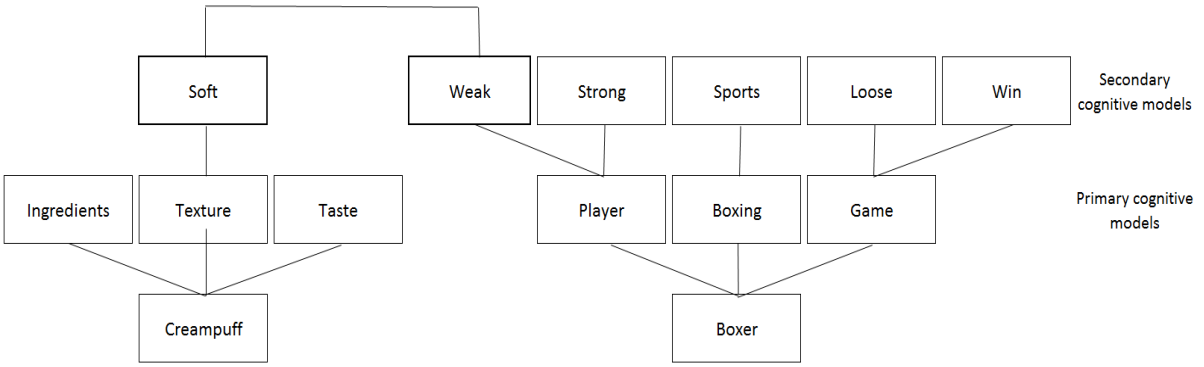


Figure 5.13 Partial cognitive model profile for [CREAMPUFF] and [BOXER]

As illustrated in Figure 5.12, referential metpahors are also identified using a intermediary word, SOFT and WEAK. As Barnden claims that conceptual connection between creampuff and boxer might be established but as shown in the fiugre 5.12, the two distinct conept need to have the intermediary cognitive model. As shown above, the LCCM framework can address a referential metaphor in a unified treatment that does not depend on the notion of refernetialy. Thus, the function of referentiality is not an index unique to metonymy but can also be used for metaphor.

5.4.3 Family-Inherited Expressions

This section considers a family-inherited expression (36): ‘Ann has her mother’s [eyes like those of her mother] (Warren 1999). According to the literature, similarity is a sign of metaphor while contiguity is a sign of metonymy. But family-inherited expressions can be interpreted as having both similarity and contiguity. The expressions, ‘her mother’s eyes’ and ‘Ann’s eyes’ have conceptual similarities such as ‘size’, ‘colour’, ‘shape’ and so forth. However, this is based on the blood relationship, which conveys a conceptual contiguity between Ann and her mother. Warren (1999) claims that the approach using similarity and contiguity does not work to identify whether this expression is metaphor or metonymy. Instead, in the case of metaphor, we can find the mapping of multiple attributes between source and target while one attribute can be focused on in the case of metonymy.

> [A] crucial difference between referential metonymy and metaphor is that in the case of referential metonymy the link between trigger and target is a relation (and one relation only), whereas in the case of metaphor, in involves one or more attributes. (Warren 1999:131)

Following this regulation, if more than one feature of Ann’s eyes—such as shape, colour and size—are shared with her mother’s eyes, Example (36) can be seen as a metaphor. If there is just one similar feature between the two, it could be a metonymy. However, this family-inherited expression is not fully explained by Warren’s regulation. In this context, listeners cannot interpret how many features a speaker has mentioned, and the background information about the blood relationship makes the interpretation more complicated.

Ann and her mother are completely different people; that is, the two people are physically different. As a result, the two people should be categorised into two distinct concepts. However, Ann and her mother are based on blood relationship, which means that the two entities are conceptually close and belong in a single concept, ‘family’.

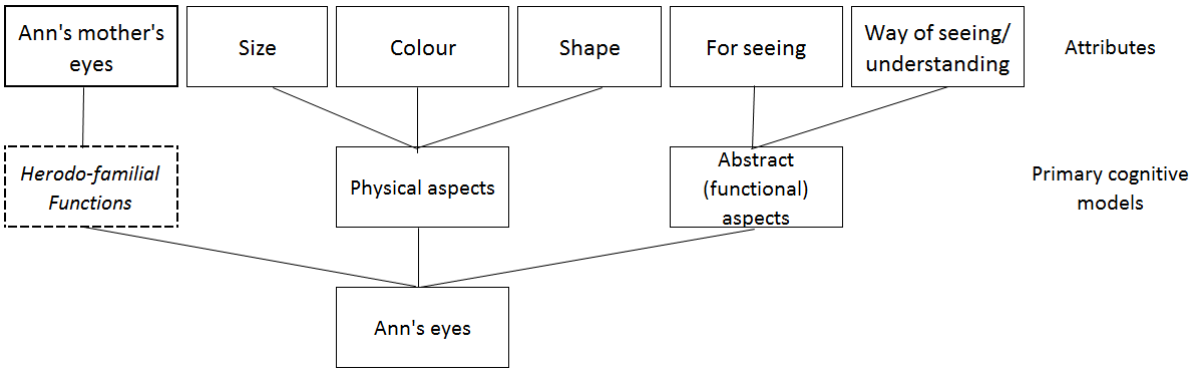


Figure 5.14 Partial cognitive model profile for [ANN'S EYES]

As illustrated in Figure 5.13, the LCCM framework places the background concept [HERODO-FAMILIAL FUNCTIONS] between Ann's eye and her mother's eye, providing a bond relationship with biological evidence. This background concept should be considered as one primary cognitive model in the cognitive model [ANN'S EYES]. The lexical concept [ANN'S EYES] includes a family relationship with her mother. This piece of non-linguistic knowledge builds one node in the cognitive model. All human beings have a biological mother and father, which is a general, intrinsic and unique information; that is, this knowledge can also be a primary cognitive model. In the understanding process, the lexical concept of [ANN'S EYES] facilitates access to the primary cognitive model HERODO-FAMILIAL FUNCTIONS and highlights the attribute, ANN'S MOTHER'S EYE. The vehicle accesses the attribute in the primary cognitive model, that is, this can be identified as a non-figurative metonymy.

In short, family-inherited metonymy includes the background condition HERODO-FAMILIAL FUNCTIONS, since family members share physical or abstract similarities. And they are conceptually strong in connections. As a result, the two concepts can be processed as metonymy, in which the two are interpreted within a single concept. However, although there is a family- inherited metonymic linkage between Ann's eyes and her mother's eyes, I would say that we cannot use 'Anne's eyes' in a sentence to refer metonymically to her mother's eyes, as in 'Anne's eyes are green' meaning Anne's mother's eyes are green. Since genes are handed down from parents to children, links from parents to children can be made. In terms of this, this is an asymmetric relation from parents to children.

From another perspective, if there are no HERODO-FAMILIAL FUNCTIONS in an expression, the interpretation will be different from the previous example, though individuals describe the same word, 'eyes'. Consider the following example: (129) Ann has Audrey Hepburn's eyes.

Example (129), 'Ann has Audrey Hepburn's eyes', describes Ann's eyes using the famous British actor, Audrey Hepburn, who was active between 1948 and 1989. Ann's eyes and Audrey's eyes fortuitously share a physical resemblance, but Ann and Audrey are not family members and there is no blood relationship. This means that the two lexical concepts can be interpreted as two different taxonomic concepts: the figurative vehicle is 'Audrey Hepburn's eyes' and the figurative target is 'Ann's eyes'. Consider the LCCM framework shown in the figure below. Both lexical concepts, [ANN'S EYES] and [AUDREY HEPBURN'S EYES], access primary cognitive models and highlight their attributes. The concepts link to each other at the primary level. Therefore, this example is called a primary-level metaphor in this thesis.

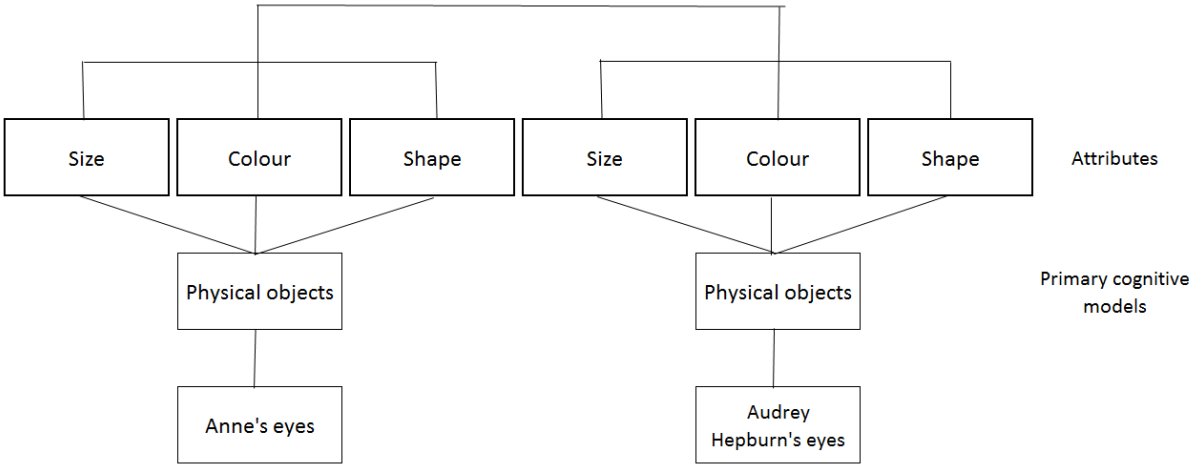


Figure 5.15 Partial cognitive model profile for [ANN'S EYES] and [AUDREY HEPBURN'S EYES]

Compare (36), 'Ann has her mother's eyes', with (130), 'Ann has Audrey Hepburn's eyes'. Example (36) conveys a blood relationship, while Example (130) conveys a non-blood relationship. In the case of Example (36), in which the vehicle and target are both human beings, the feature of a blood relationship can arise as the primary cognitive model, HERODO-FAMILIAL FUNCTION, which creates a bond connection. If a sentence mentions family members' appearances, personalities and abilities, we can find both physical resemblance and conceptual

closeness. In this case, if listeners can detect a connection between the two lexical concepts or the connection is clearly open, as in a blood relationship, it is a metonymic expression. In contrast, in Example (130), where two people do not have a blood relationship, we can also find physical resemblance but not conceptual closeness. Therefore, since the two people (concepts) are conceptually independent, the expression is metaphorical.

As for the level of figurativity, Example (36) is a non-figurative metonymy because the lexical concept [ANN'S EYES] accesses a primary cognitive model and highlights its attribute. On the other hand, Example (130) is a primary-level metaphor. The two lexical concepts [ANN'S EYES] and [AUDREY HEPBURN'S EYES] access the primary cognitive models and highlight their attributes.

Note that primary-level metaphor is a metaphor; therefore, the operation is across two distinct concepts and each figurative source and target reach a primary cognitive model. In terms of this, I would say that each source and target do not have figurativity. However, metaphorical connection occurs in the two different domains, in this respect: the sentence involves a metaphorical notion. This is to say, a prototypical/pure metaphor is more figurative as measured by access path lengths than a prototypical/pure metonymy is.

5.4.4 One Sentence with Different Understandings

This section discusses one sentence that can be understood as both metaphor and metonymy. These interpretations depend on the speaker's intention, the context and the speech environment. Consider the following example:

(120) She bought Shakespeare

As shown in the previous chapter, this example is a popular metonymic expression (see Chapter 4 for more details). However, this example could serve both as an example of metonymy and as an example of metaphor, because BUY could metaphorically mean 'BRIBE', when Shakespeare is a living public official, for example. In this case, the agent 'she' paid money/gift to an ordinary person named Shakespeare to persuade him to do something. Shakespeare is an ordinary person (a human being); therefore, the lexical concept [SHAKESPEARE] accesses a primary cognitive model, 'HUMAN', while the verb 'BUY' is used as metaphorically, since the

lexical concept [BUY] refers to the meaning of BRIBE. The lexical concept [BUY] accesses the secondary cognitive model, and the figurative target BRIBE accesses a primary cognitive model: TO ILLEGALLY GIVE SOMEBODY MONEY/GIFT TO PERSUADE HIM. They match each other metaphorically. The connection point in each source and target involves similar cognitive models; therefore, a metaphorical link is established.

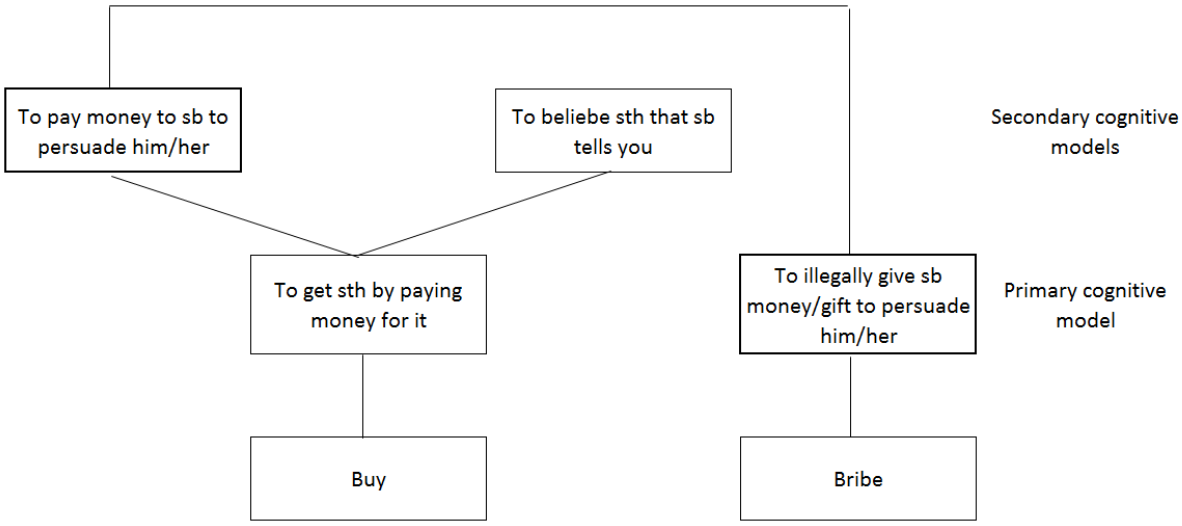


Figure 5.16 Partial cognitive model profiles for [BUY] and [BRIBE]

Another example is as follows:

(37) There's a snake on the left-hand side of the drawing (Barnden 2010)

Example (37) has both metaphoric and metonymic meanings (Barnden 2010). The snake lines in metonymy and metaphor are visually the same lines. A snake is an animal: an animate entity with a limbless, long, thin body that moves in a meandering motion. A wavy line is a non-animate entity depicted by an artist. In the metonymic meaning, the lexical concept [SNAKE] is representative of a WAVY LINE, and a WAVY LINE is representative of the [SNAKE]. If the speaker intends to say in Example (37) that a snake refers to the wavy line that is depicted as a snake in the drawing, the example can be understood as metonymy; that is, the lexical concept of WAVY LINE is related to the lexical concept of [SNAKE]. In the metaphorical meaning, the lexical concepts [SNAKE] and WAVY LINE are understood as different concepts because the artist did not intend to draw the line the same as a snake. Therefore, listeners match the two different concepts as being metaphorical. In other words, there are at least two ways to interpret Example

(37) and different ways to understand one sentence. However, the way in which a lexical concept accesses non-linguistic knowledge and connects the nodes is still not clear. I take up this issue as follows.

The metaphorical case is when the speaker uses [SNAKE] to describe a wavy line in the drawing. The drawing could be entirely non-representational. The metaphor is essentially the same as when one says a road is snaking across the land. So in the sentence the phrase 'a snake' is to be taken as a referential metaphor referring to a drawn line. While the metonymic case is when the speaker means that, say, a wavy line on the left-hand side of the drawing is a representation of a snake (the drawing might of a jungle scene.) Here we have a form of 'representational' metonymy. The phrase 'a snake' can be thought of as a paraphrase of 'something in the drawing that represents a snake'. There are two concepts (snake and wavy line) in both the metaphoric and the metonymic case, and in both cases the representation or similarity operates between the two concepts.

The LCCM operation leads to a metonymic interpretation. The lexical concept [SNAKE] has potential primary cognitive features such as SHAPE, BIOLOGICAL CHARACTERISTICS, BEHAVIOUR and REPRESENTATION and potential secondary cognitive model features such as WAVY LINE. The figurative vehicle accesses the seocodary cognitive model, WAVY LINE. The access route between the vehicle and the target is longer than in the primary cognitive model, and as a result this expression is figurative. This expression is metonymic since the operation is completed within a single concept, SNAKE. This is called figurative metonymy in my thesis.

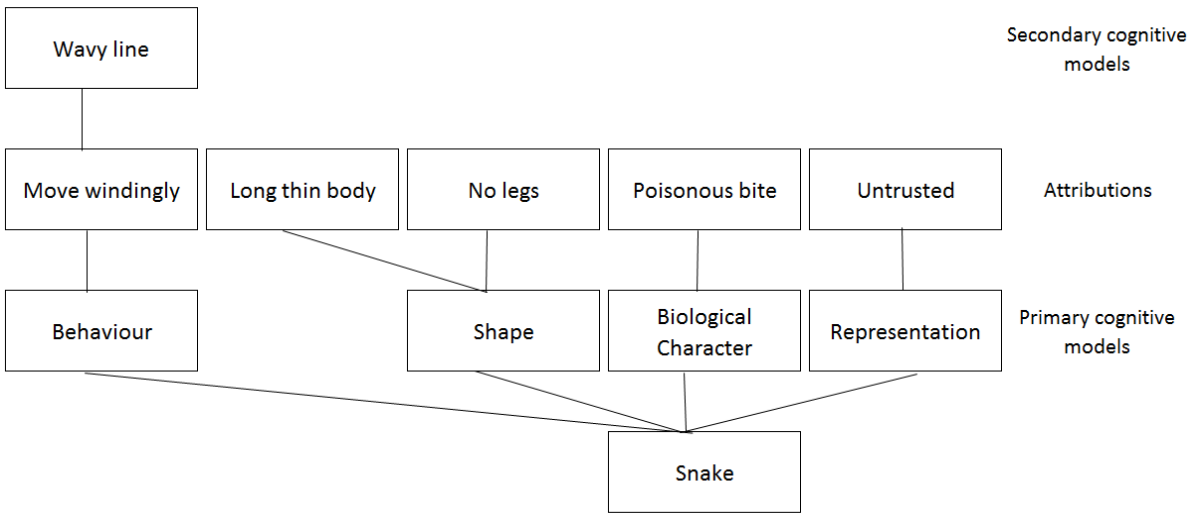


Figure 5.17 Partial cognitive model profile for [SNAKE]

In contrast, Example (37) can be also be interpreted as a metaphor. In the LCCM framework, the figurative vehicle [SNAKE] accesses MOVE WINDINGLY as an attribution in the primary cognitive model; the target WAVY LINE accesses MOVE WINDINGLY in the primary cognitive model. The attribute MOVE WINDINGLY—which is in the primary cognitive model in the concept [SNAKE]—and the primary cognitive model MOVE WINDINGLY in the concept WAVY LINE match with each other. Although the figurative vehicle accesses a slightly higher cognitive model than a target accessing a primary cognitive model, both are still at the primary cognitive level in the construction. Therefore, this expression is metaphorical. But each source and target does not have figurativity. This is called a primary-level metaphor in my thesis.

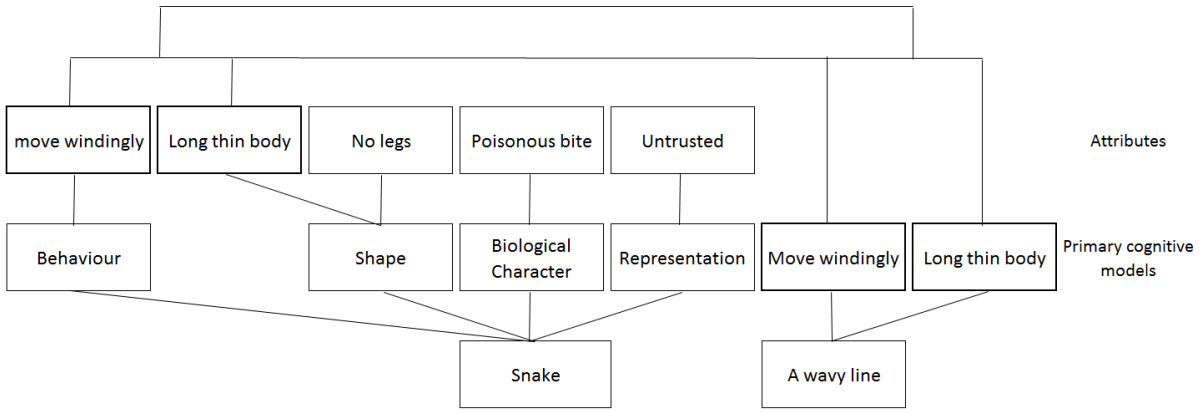


Figure 5.18 Partial cognitive model profile for [SNAKE]

In short, Example (37) is difficult to identify as either metaphor or metonymy because the interpretation is subject to influence from outside functions, such as the speaker's intention, context and speech environment. This cannot help with the LCCM framework. However, I have contributed to improving the construction of metaphor and metonymy and have shown the dynamic connections between nodes within non-linguistic knowledge. This section shows that there is often more than one access route in a sentence, and, depending on the interpretation, individuals can vary the routes between language use and non-linguistic knowledge. Individuals can consider two entities in one concept or two different taxonomic concepts on different occasions; this means that our non-linguistic knowledge is dynamic and continually updating.

Therefore, in metonymic case, there is a weak conceptual closeness between a vehicle and target but, as mentioned above, there is still an alignment between the two in the speaker. While in metaphor, two distinct concepts are independent from each other and individually process metonymic operation in each concept. Therefore, even though there is a similarity between the two concepts, both concept are independent. Finally, it seems that individuals can flexibly access cognitive models depends on contexts or situations although we are constrained by some principles that I mentioned in Chapter 3.

5.4.5 Metaphtonymy

Goossens (1990) investigates the relationship between metaphor and metonymy called 'metaphtonymy': metaphor from metonymy, metonymy within metaphor, and demetonymisation inside a metaphor, which are also different types of figurative expressions understood as metaphor, metonymy or in between. He suggests that these different types of figurative expressions cannot be described in standard accounts of metaphor and metonymy, as they include both metaphor and metonymy in their constructions. According to Goossens, a metaphor from metonymy is a frequent type of the figurative expressions, since a source and a target domain can be joined together naturally in one complex concept, which underlies a metonymic relation. Goossens also states that,

> [T]he perception of similarity that is motivating metaphors are based on our awareness that two certain things often hold contiguity within the same domain. The contiguity often gives us a "natural", experiential, grounding for our mapping between two discrete domains (1990:336).

Metonymy within metaphor is also frequently produced, although less often than metaphor from metonymy. This type of metaphor possesses a metonymic relation in a target domain, and the metonymic relation is kept in the understanding process. That is, metonymy is involved in a metaphor, and the metaphor maintains itself, which means that it is not destroyed by the superimposed metonym (Goossens 1990). This section considers how different types of expressions can be analysed theoretically. I show this through a construction of the cognitive model. Consider the following three examples (Goossens 1990):

(40) “Oh dear”, she giggled, “I’d quite forgotten” (Goossens 1990)

(41) I should/could bite my tongue off (Goossens 1990)

(42) Pay lip service (Goossens 1990).

5.4.5.1 Metaphor from Metonymy

Example (40), ‘“Oh dear”, she giggled, “I’d quite forgotten”’, is called a ‘metaphor from metonymy’. The word ‘giggle’ can be understood as having three meanings: a literal meaning, to laugh quickly or quietly; a metonymic meaning, where ‘laugh’ and ‘say’ are intermingled in ‘giggle’; and a metaphorical meaning, ‘saying as if giggling’. In a metonymic reading, ‘laugh’ and ‘say’ occur in a single concept, ‘giggle’, while in a metaphorical reading, ‘saying’ is similar to ‘laughing’ in this context. It seems that the metonymic meaning is established first and then extends to the metaphorical meaning. Therefore, Example (40) is called a metaphor from metonymy (Goossens 1990).

In the LCCM framework, Example (40) uses a metaphorical model with two different concepts: [SAY] and [GIGGLE]. In this construction, [SAY] and [GIGGLE] occur at the same time, or [SAY] and [GIGGLE] become different concepts. The word ‘giggle’ is a figurative vehicle, and LAUGH and SAY are mixed in the [GIGGLE] model. The target, [SAY], includes SAY at the primary cognitive model in this context. The figurative vehicle [GIGGLE] accesses LAUGH in the primary cognitive model, while the target [SAY] accesses [SAY] in the primary cognitive model. The figurative vehicle and the target link to each other at the primary cognitive level and create a new meaning, SAYING AS IF GIGGLING, at the secondary cognitive model. Unlike other metaphors (e.g., The creampuff didn’t even show up, Ann has her mother’s [eyes like those of her mother], and There’s a snake on the left-hand side of the drawing), this example combines the two concepts [GIGGLE] and [SAY] and creates a somehow new meaning at the secondary cognitive level. In this case, rather than a new meaning arises, the meaning of ‘saying as if giggling’ is sort of a combination of ‘say’ and ‘laugh’. However, this example is still functionally different from the other metaphors above. Since source and target match and create a new (combination) meaning in the secondary cognitive model, this is called a secondary-level metaphor in my thesis.

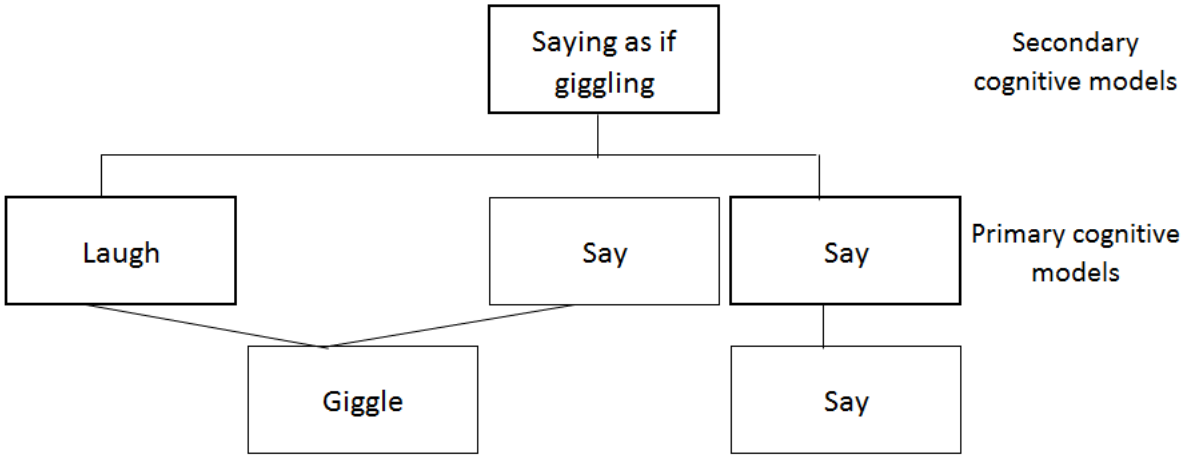


Figure 5.19 Partial cognitive models profile for [GIGGLE] and [SAY]

5.4.5.2 Metonymy within Metaphor

The next example, (41), 'I should/could bite my tongue off', can be seen as metonymy within metaphor. Example (41) can be interpreted as having two meanings; one is the literal meaning, 'I should/ could bite my tongue off', and the other is a metaphorical expression interpreted as 'I am sorry for what I have just said, and I should punish myself'. The action 'bite my tongue off' means 'deprive myself of the ability to speak'. This has a similar meaning to 'punish myself', and as a result this statement is metaphorical. However, since 'tongue' refers to 'the ability to speak', this metaphorical expression includes a metonymic phrase. Therefore, this is a metaphorical expression, but metonymy is hidden in the metaphor (Goossens 1990).

In the LCCM framework, the lexical concepts of [TONGUE] and [BITE (OFF)] extend their meanings in each concept and link at a higher level of figurativity. The action of 'bite' means 'to cut something using your teeth and something disappears in the mouth', but here accesses the secondary cognitive model [DEPRIVING SOMETHING]. By contrast, the lexical concept [TONGUE] primary means A PART OF THE MOUTH THAT HELPS WITH SPEECH, but here accesses the secondary cognitive model ABILITY TO SPEAK. The TONGUE represents THE ABILITY TO SPEAK, in this case. Finally, DEPRIVING SOMETHING and THE ABILITY TO SPEAK link in the higher secondary cognitive model and create a new meaning: to PUNISH MYSELF. The two concepts create a new meaning at the higher, secondary cognitive level. In terms of this, this sentence

exhibits higher figurativity, and the focus is on the level of figurativity, which is called a higher, secondary-level metaphor in this thesis.

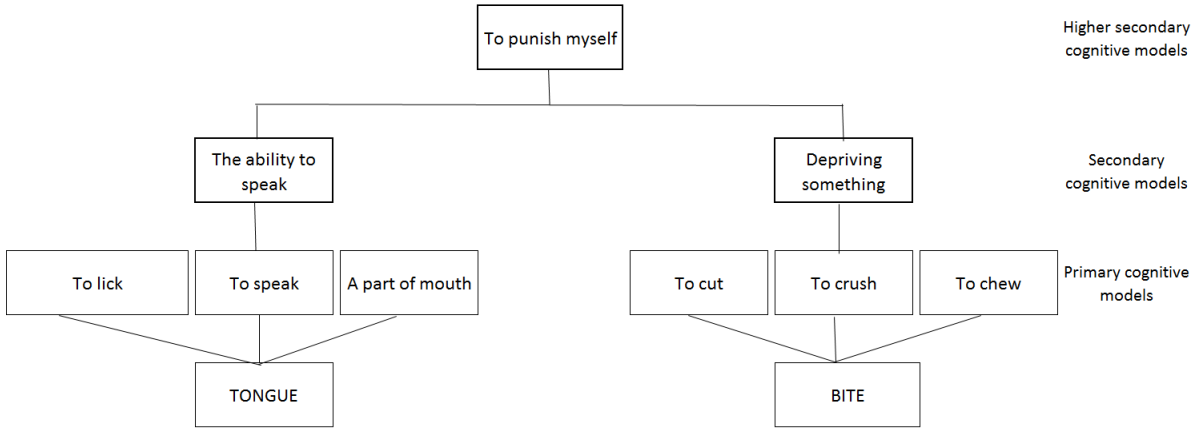


Figure 5.20 Partial cognitive model profile for [BITE] and [TONGUE]

5.4.5.3 Demetonymization inside a Metaphor

Example (42), 'pay lip service', is called 'demetonymization inside a metaphor'. The expression in Example (42) means 'supporting in words but not in fact'. At first glance, the lexical concept [LIP] stands for SPEAKING, which is metonymic. However, [LIP SERVICE] can also mean SERVICE WITH THE LIPS (AND NO REAL EFFORT), which is metaphoric. In this sense, the metonymic relationship between [LIP] and SPEAKING is separated, which is called 'demetonymization' (Goossens 1990).

As illustrated in the following LCCM framework, both the lexical concepts [LIP] and [SERVICE] facilitate access to primary cognitive models and extend to secondary cognitive models in a single concept. Both lexical concepts reach primary cognitive models within a single concept. After that, the concept extends to a higher, secondary cognitive model. Example (42) is similar to (41): 'I should/could bite my tongue off' (metonymy within metaphor). Both lexical concepts extend in a single concept and then match at the secondary cognitive level. The matching creates a new meaning, SERVICE WITH THE LIPS ONLY, which extends to SUPPORTING IN WORDS BUT NOT IN FACT and reaches SPEAKING WITHOUT ONE'S TRUE THOUGHTS at the further

higher, secondary cognitive model. That is to say, this is called a higher secondary-level metaphor because the access route is very long.

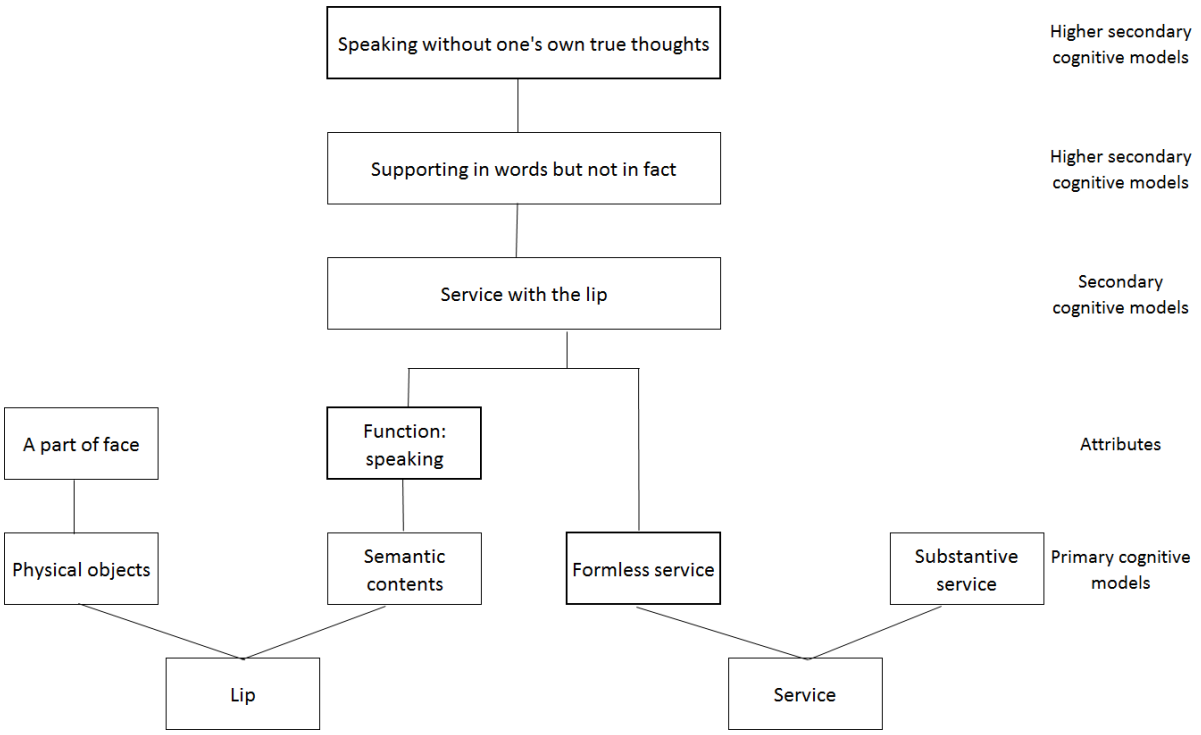


Figure 5.21 Partial cognitive model profile for [LIP] and [SERVICE]

These three examples are somehow create a new meaning. Unlike resemblance metaphors, two outcomes of metonymic expressions in figurative source and target have different cognitive models. That is, source and target are not share the similar or the same cognitive models in each concept. In this case, an original notion of metaphor as double metonymy cannot work in the understanding operation since it highly dependents on the intermediary word to connect two different concepts. However, LCCM theory has more flexible notion of meaning construction and figurative source and target can accesses their cognitive model base on the context (and also several principles), which mean that they freely access different cognitive models in each cognitive model profile and match until a sentence meaning is established. There are many metaphors that do not involve correlation, referential, and

resemblance. At that time, preserving the metonymic operation in each concept, the understanding process can be proceed in the LCCM mechanism.

5.4.6 Two-Step Referentiality: Metonymic and Metaphorical

This section discusses two nicknames that have two-step referentiality. Two-step referentiality here means including a metonymic referential step and a metaphorical referential step. Generally, metonymic expressions have one-step referentiality, in which a reference point (a metonymic target) is referred to by a reference object (a metonymic vehicle) within a single concept. However, in this case, we have further expansion: that is, a metaphorical step after the metonymic step. This section considers these steps in Japanese nicknames.

Consider the situation in which individuals give a nickname to a person. They might find similarity or contiguity between that person and something such as a thing or an animal. For example, if the shape of someone's haircut is similar to a mushroom, the person might get the nickname 'mushroom'. This belongs to a metaphorical relationship, since the two concepts, the person and a mushroom, are independent of each other. In another example, if an individual always wears black clothes, the person might get the nickname 'black clothes', which is a metonymical relationship because black clothes are considered to be part of the person's concept (Kawakami 1996).

However, the following examples are slightly different, because they use referentiality twice: metonymic and metaphorical. Kawakami (1996) claims that some nicknames include 'two-step referentiality', which is also referred to as a metonymy from metaphor. Consider the following examples:

(130) Osho (Kawakami 1996)

(131) Pon (Kawakami 1996)

In Example (130), 'Osho' ('the King' in English), originally refers to a Japanese chess piece. But in this context, it is the title of a song by a Japanese male singer, Hideki Murata. Example (130) refers to a scenario in Kawakami's account of an ordinary person (e.g., teacher) who resembles a famous person Hideki Murata. Over time, the ordinary person is given Hideki

Murata's name as a nickname. This is a one-step reference. However, in this case, the person gets a nickname that is the title of a Hideki Murata song, 'Osho'. Two-step referentiality is applied here.

Osho (song title) → (metonymic referentiality based on contiguity) →a singer (Hideo Murata) → (metaphorical referentiality based on similarity) →ordinary person (e.g., teacher)

The nickname refers to a famous singer and is then extended to the singer's song title. Therefore, when a listener hears the 'Osho', that person will understand metonymic relation from a song title 'Osho' to a singer 'Hideo Murata' and then reach a person who has the nickname 'Osho' by using metaphorical referentiality. As a perspective of the person who makes the nickname, a metaphorical operation occurs between singer Hideo Murata and the person who receives the nickname, and then a metonymic operation occurs, in the metonymic process, a cognitive model is picked up, which is conceptually close to the Hideo Murata (a song title). These processes are applied in the concept 'Osho'. As a result, this nickname includes two-step referentiality: metonymic and metaphorical. (Kawakami 1996).

Consider the meaning construction in the LCCM model. The lexical concept [OSHO] should be the figurative source, and the person (e.g., teacher) who gets the nickname should be the target. At first, the lexical concept [OSHO] facilitates access to the SONG TITLE at the primary cognitive model because the song was very famous at the time; most people in a given speech community (Japan) share the information that the word 'Osho' is a song title. That is, SONG TITLE is possibly located in a primary cognitive model in this context, according to the discipline of the primary cognitive model (Langacker 1993; Evans 2015). The figurative source accesses a secondary cognitive model, HIDEKI MURATA, who sings the song 'Osho', and it highlights the attribute APPEARANCE. The target [PERSON] facilitates access to a physical aspect and highlights the attribute APPEARANCE. Ultimately, the two concepts metaphorically link to each other. The lexical concept [OSHO] reaches the secondary cognitive level; therefore, this is a second-level metaphor. Note that though I define the lexical concept SONG TITLE with respect to the primary cognitive model, I would say that there is a very weak node connection between [OSHO] and SONG TITLE since this is an emergent connection within a certain society in a certain time period.

This node connection cannot be built up in the current society because that trend has passed. Therefore, this nickname might be easily misunderstood or fail to convey the correct meaning.

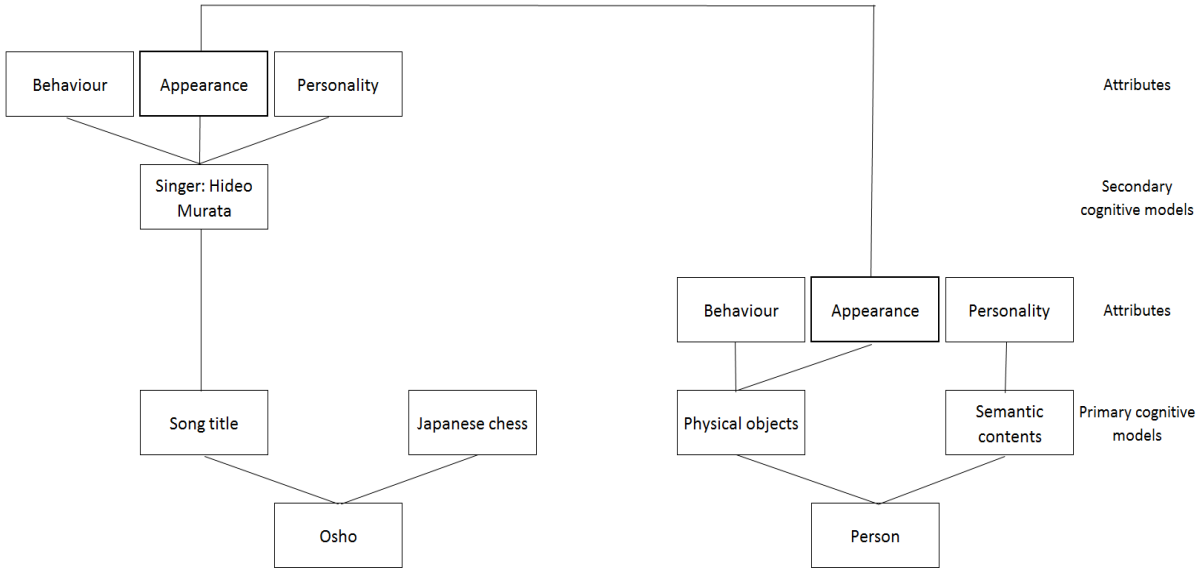


Figure 5.22 Partial cognitive model profile for [KING] and [PERSON]

Example (131) also uses two step-referentiality. The lexical concept [PON] is an onomatopoeic word (sound) that refers to the sound of raccoon dogs beating their bellies. Raccoon dogs do not beat their bellies in the real world, but this sound comes from traditional Japanese fairy tales and movies that include a scene in which raccoon dogs dance and beat their bellies with special effects. In this example, the word 'Pon' is used as a nickname of an individual. First, a person shares some similarities with a raccoon dog—perhaps appearance or behaviour—which indicates a metaphorical relationship between a raccoon dog and the person. This is based on a conceptual metaphor: HUMANS ARE ANIMALS. The metaphorical matching associated with 'Pon' extends from raccoon dog behaviour or appearance, which can result in a metonymic relationship. Since there is a conceptual metaphor: HUMANS ARE ANIMALS, it help people to metaphorically match with two different concepts: people and raccoon dogs. Therefore, this is called metonymy from metaphor, or in other words, this nickname uses two-step referentiality (Kawakami 1990).

A person → (metaphorical similarity: appearance and/or behaviour based on conceptual metaphor: HUMANS ARE ANIMALS) → Raccoon dogs → (metonymic contiguity) → Pon (the sound of raccoon dogs beating their bellies)

In the LCCM framework, the lexical concept [PON] should be the figurative source (vehicle), and the person who gets the nickname should be the target. At first, the lexical concept [PON] facilitates access to the primary cognitive model SOUND. It then extends to the secondary cognitive model RACCOON DOG and highlights its attributes APPEARANCE or BEHAVIOUR. The lexical concept [PERSON] facilitates access to PHYSICAL ASPECTS and highlights APPEARANCE or BEHAVIOUR. Finally, the two concepts link to each other. The lexical concept [PON] extends to the secondary cognitive level, which can result in a second-level metaphor. However, the onomatopoetic word (sound) 'Pon' itself is rare in general language use, and a node connection between [PON] and SOUND works only in a certain society (Japan). In other words, this nickname can only arise in a particular speech community.

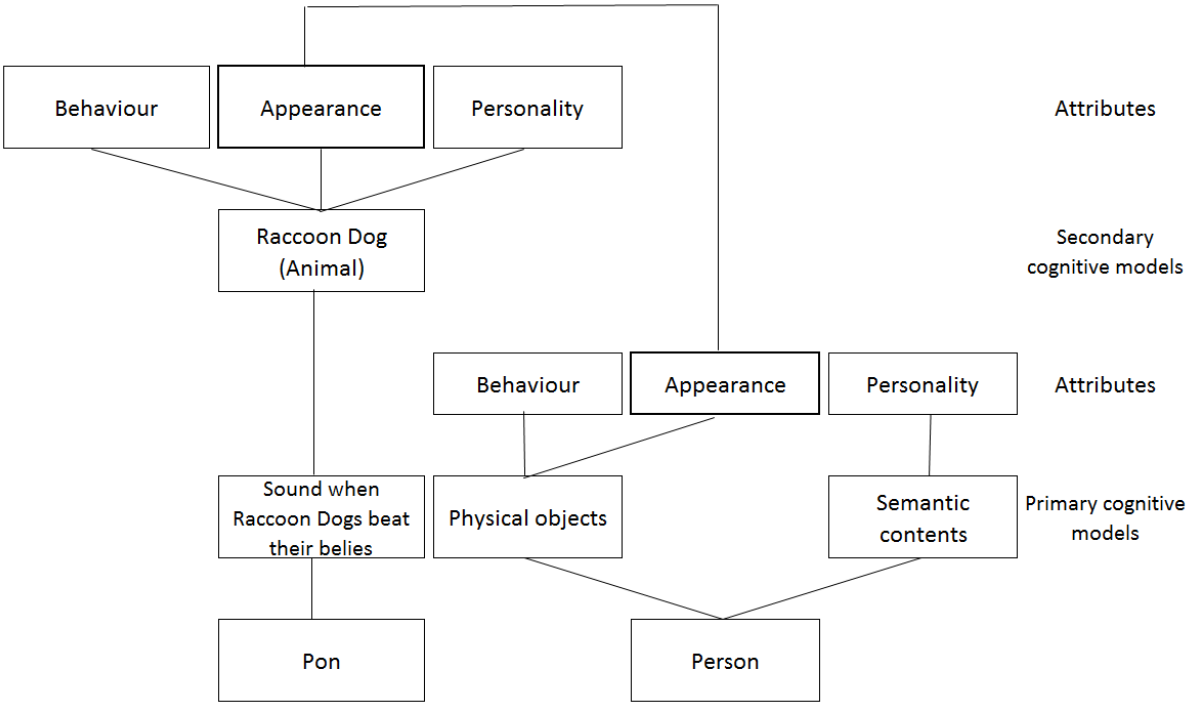


Figure 5.23 Partial cognitive model profile for [PON] and [PERSON]

Both example so-called two step referentiality or a chaining metonymy and metaphor, again, two distinct concept of metaphorical source and target are independent from each other and metonymic operation individually occurs in each concept. As a result of the metonymic operation, the similar cognitive model can be found and create a metaphorical link. In both operations, the figurative sources access an attribute in the secondary cognitive level, therefore, both metaphors are called secondary-level metaphor.

5.4.7 Summary of Analysis

I use the notion of LCCM theory and metaphor as double metonymy to describe the meaning construction in each source and target, which assume that some metaphors made from two metonymic operation including the same or similar cognitive models but some of metaphors are not although they have also involve two metonymic operations. In terms of theses, metaphors possess two independent concepts which can serve to a metonymic operation. In the understanding processes, an outcome of metonymic operation appears in each source and target. In the case of referential, correlation, and resemblance metaphors, we can find a similar feature across the two concepts, for example, two concepts are sometimes mentally correlated in our experiences, a source refers to its target in the world rather than the more typical use, or the two have perceptual and/or conceptual similarities. However, although the linkage between source and target is different, the LCCM framework (and metaphor as double metonymy) can account metaphorical examples above systematically.

Another type of metaphors, such as overlap or combination of metaphor and metonymy, which can be understood in several different ways, but the LCCM framework help us to account for more systematically as shown in above figures. Individuals relatively flexible to extend a meaning of lexical concept based on the contexts or situations, they can reach a proper meaning (cognitive model). In the LCCM framework, because there are two cognitive levels: primary and secondary, regardless of whether a given lexical concept accesses primary or secondary cognitive model, the operation is a metonymic. However, other scholars (e.g, Goossens 1990; Ruiz de Mendoza Ibáñez and Díez Velasco 2002) cases, in the LCCM framework, if a given lexical concept accesses secondary cognitive model, the operation is a metonymic but if the concept accesses primary cognitive model, the operation does not considered as metonymic. In this respect, LCCM theory can trace a metonymic sense more deeply than other approaches.

Observing each lexical concepts (mainly source (vehicle) and target), the LCCM framework can systematically treat metonymy and metaphor and also complicated figurative expressions, such as chaining metaphor and metonymy/metonymy and metaphor. As a result, this section can account systematically for different types of expressions, and a conceptual spectrum can be found by measuring the level of figurativity in each concept.

5.4.7.1 Access-Route Length

This section discusses access-route length, which I attempt to identify as the unique notion for a unified account of figurative expressions. The notion of access-route length in the LCCM model is a clue for finding a figurative spectrum. As mentioned in Chapter 3, Evans (2010) claims that the access-route length between a given lexical concept and an intended cognitive model is associated with the level of figurativity.

Recall that when a given lexical concept accesses a primary cognitive model, the access-route length is short and the level of figurativity is zero; as a result, the lexical concept is literal. When a given lexical concept accesses a secondary cognitive model, the access-route length is longer and the level of figurativity is higher; as a result, the lexical concept is figurative. Unlike metonymic cognitive structure, metaphorical structures can be identified as more complicated, but in general, access-route length is based on the claim that so-called prototypical/pure metaphor is more figurative as measured by access path lengths than so-called prototypical/pure metonymy is since metonymic operation occurs in ne single domain while metaphor involves two distinct domains.

This chapter examined the length of access path in each figurative source and target. If the access route in either source or target is longer, the expression has higher figurativity; an expression with a shorter access route has lower figurativity. More specifically, metaphors have higher figurativity than metonymies. Metonymic operation occurs in a single concept, while metaphorical operation occurs across two different concepts. The two concepts are considered, and because the number of potential cognitive models increases, the metaphorical operation is more complicated than the metonymic operation; metaphors have higher figurativity than metonymies. Additionally, some metaphors include a metonymic operation in their process, and some metonymies also include a metaphorical operation in their process. Though some

expressions can contain both phenomena, the LCCM framework shows both the metaphorical and metonymic understanding processes in the cognitive model. This mixed operation does not affect the level of figurativity. Therefore, by focussing on the access-route length between a given lexical concept and an accessed cognitive model and by seeking how vehicles choose their ways to reach targets, all types of figurative expressions (including non-prototypcial ones) can be identified.

The expressions mentioned above are mainly divided into three figurative levels within metaphor and metonymy. The following expressions use the metaphorical form and have higher figurativity. In these cases, either the figurative vehicles or targets access the higher secondary cognitive level. This is called a higher secondary-level metaphor in my thesis.

(124) The ham sandwich asked to be eaten

(97) My boss is a pussycat (Evans 2009a)

(41) I should/could bite my tongue off (Goossens 1990)

(42) Pay lip service (Goossens 1990)

The four examples include higher figurativity, which reaches further than the secondary cognitive level. This thesis describes expressions that can have higher figurativity (the case that a lexcial concept accesses more than higher secondary cognitive model) as having the highest figurativity, although Example (42) has higher figurativity than examples (124), (97), and (41)

The following expressions are secondary-level metaphors, but the figurativity is lower than in the previous examples. Either figurative vehicles or targets can afford access to the secondary cognitive level.

(122) The girl is a birch (Group μ 1981)

(125) My boss purrs

(126) My boss meows

(127) I see what you mean (C. Johnson 1997)

(128) Drunk driving arrests are up this year (Grady 1993)

(39) Susan sank into a pit of sadness. She stayed at the bottom for many months (Barnden 2010) (Barnden 2010)

(38) The creampuff didn't even show up (Gibbs 1990)

(41) "Oh dear", she giggled, "I'd quite forgotten" (Goossens 1990).

(130) Osho (Kawakami 1996)

(131) Pon (Kawakami 1996)

These examples include figurativity, in which either the figurative vehicles or figurative targets reach the secondary cognitive level. Although the figurative vehicles in examples (130) and (131) afford access to an attribute in a secondary cognitive model, they are still in the secondary cognitive level; therefore, these two examples are defined as secondary-level metaphors. Among these examples, 'My boss purrs' and 'My boss meows' are slightly different cases. I would say that metonymic and metaphorical operations occur simultaneously in both sentences. However, conceptual metaphor is located in the primary cognitive level and does not affect the level of figurativity in that sentence (see Chapter 3 for more details), therefore, metonymic operation can be calculated as figurativity of this sentence.

The following expressions have metaphorical form but both figurative source (vehicle) and target reach the primary cognitive level.

(37) There's a snake on the left-hand side of the drawing' (Barnden 2010) (metaphorical version)

(129) Ann has Audrey Hepburn's eyes

Example (37), 'There's a snake on the left-hand side of the drawing', can be understood as a metaphor. [SNAKE] and WAVY LINE are different lexical concepts, and both facilitate access to primary cognitive levels, MOVE WINDINGLY and LONG THIN BODY. The two share the cognitive models MOVE WINDINGLY and LONG THIN BODY and match at the primary level. As a result, this expression is a primary-level metaphorical expression. In a similar way, Example (129) holds a metaphorical form that connects 'Ann' and 'Audrey Hepburn', but the two match each other at the primary cognitive level. Therefore, each lexical concept (source and target) does not

includes figurativity, but the matching occurs across domains. Therefore, this thesis call this type of metaphor as primary-level metaphors.

As for metonymic expressions, as shown in Chapter 4, Example (98) 'The ham sandwich has asked for the bill' includes higher figurativity because the figurative vehicle [HAM SANDWICH] accesses a higher secondary cognitive model and completes the matching within a single concept, [HAM SANDWICH]. The example includes higher figurativity. In addition, Example (37) 'There's a snake on the left-hand side of the drawing' can also be interpreted as metonymy, and it is placed as a figurative metonymy in the conceptual continuum, in which a vehicle accesses a target in the secondary cognitive level. Therefore, this is a figurative metonymy. Example (36), 'Ann has her mother's [eyes like those of her mother], is a non-figurative metonymic expression but is slightly different from the two examples above. Family-inherited expressions are naturally considered the background condition of HERODO-FAMILIAL FUNCTION. The given lexical concept [ANN'S EYE] accesses the attribute MOTHER'S EYE in the primary cognitive model supported by the background condition, HERODO-FAMILIAL FUNCTION. Based on this, the metonymic vehicle accesses an attribute in a primary cognitive model and a matching occurs in a single concept. Therefore, it can be identified as a non-figurative metonymy.

Therefore, I conclude that all prototypical metaphors, metonymies and other types of figurative expressions can be treated with a single conceptual spectrum (LCCM theory) that shows different levels of figurativity. Look at the table of the summary.

Table 5.1 Gradation of figurative expressions in the LCCM framework

Metonymy			Metaphor		
Primary cognitive level	Secondary cognitive level	Higher secondary cognitive level	Primary cognitive level	Secondary cognitive level	Higher secondary cognitive level
(36) Ann has her mother's [eyes like thouse of her mother]	(37) There's a snake on the left-hand side of the drawing (metonymic)	(98) Ham sandwich has asked for a bill	(37) There's a snake on the left-hand side of the drawing (metaphoric)	(38) The creampuff didn't even show up	(41) I should/could bite my tongue off
			(129) Ann has Auderey Hepburn's eyes	(41) "Oh dear", she giggled, "I'd quite forgotten"	(42) Pay lip service
				(39) She stayed at the bottom for many months	(97) My boss is a pussycat
				(122) The girl is a birch	(124) The ham sandwich asked to be eaten
				(125) My boss purrs	
				(126) My boss meows	
				(127) I see what you mean	
				(128) Drunk driving arrests are up this year	
				(130) Osho	
				(131) Pon	

This table shows the spectrum of figurativity, focussing on the access-route length between a given lexical concept and an accessed cognitive model in the LCCM framework. If you return to Chapter 4, you can see the relationship between literal and metonymic expressions (see Table 4.1 in Chapter 4). To clearly show what this chapter covers, I do not include Chapter 4. But this table is continuous with Chapter 4.

Technically speaking, the notion of figurativity in this thesis is different from the metaphoricity in general. Metaphoricity is described as the power of metaphor that expresss a relation between metaphorical source and target, presumably. Depending on how you pick up words or how to link words, the expression might have special meaning or effect in the conversation. However, here I use the notion of figurativity in a different way. The thesis

focuses on each concept (source (vehicle) and target) and observes how much the lexical concept extended the meaning. Then the higher one is counted in a metpaphorical case. Therefore, the thesis dose not consider the power of metpahor but observes the meaning extension of lexical cocnepts in metaphorical source and target. Nontheless, I assume that the notion of figurativity is also related to metaphoricity in some way. In the future research, I will consider the difference between metaphoricity and figurativity in more details.

5.5 Summary

This chapter addressed the question, 'How is metonymy related to other figurative expressions such as metaphor?' In particular, I have clarified the different types of expressions that are interpreted as being in between metaphor and metonymy (e.g., referential metaphor, family-inherited metaphor, either metaphor or metonymy, metaphor from metonymy, metonymy within metaphor, demetonymization inside a metaphor and two-step referentiality). Focussing on these different types of figurative expressions, the present study finds that figurative expressions are spread out across a wide range of conceptual levels and consist of a conceptual spectrum between metaphor and metonymy.

First of all, according to traditional accounts, the notions of similarity and contiguity serve as a main index for identifying metaphor and metonymy. However, this chapter and the previous two chapters have found that the notions of contiguity and similarity do not have significant effects on identifying the differences between metaphor and metonymy. I mean that contiguity is important to metonymy but that it does not by itself provide an adequate criterion, as other factors must also be brought in. Instead of these functions, access-route length is more important for identifying different types of figurative expressions (as shown above with LCCM models) by observing the construction of meaning between a vehicle and a target.

This chapter purposely uses the notion of metaphor as double metonymy and the LCCM framework, carefully investigates a meaning extension in each source and target. I revealed that metonymy has an operation between a vehicle and target in a single concept, the conceptual strength (closeness) between vehicle and target relates to the level of figurativity. The closeness is an access route length. On the other hands, metaphorical source and target are relatively independent from each other since both concept involve a metonymic operation individually. Metaphorical operation occurs from these metonymic operations. As mentioned above,

metaphor has higher figurativity than metonymy in general, if the expression involve a metaphorical operation in the understanding process, the expressions can be located in metaphorical stage. To sum up, different types of figurative expressions can be accounted for systematically in the LCCM framework (cooperating with other approaches). Therefore, this chapter systematically shows the spectrum of metonymic and metaphorical expressions.

Additionally, using the LCCM framework to analyse the level of figurativity shows that all figurative expressions are located on a conceptual continuum between metaphor and metonymy. As shown in the previous two chapters, metonymic expressions have at least three conceptual levels: i) a non-figurative level, in which a vehicle accesses attributions in primary cognitive models; ii) a low conceptual level, in which a vehicle accesses the primary cognitive models; and iii) a higher conceptual level, in which a vehicle accesses secondary cognitive models. Metaphors can also be divided into at least three types: i) primary-level metaphors, in which both a figurative vehicle and a figurative target reach the primary cognitive level; ii) secondary level metaphors, in which either a figurative vehicle or a figurative target accesses the secondary cognitive level; and iii) higher secondary-level metaphors, in which either a figurative vehicle or a figurative target accesses more than the secondary cognitive level.

In short, in a turn away from traditional accounts, the present study provides a new perspective on figurative understanding by focusing on the access-route length in each source and target concepts. This feature allows all types of figurative expressions to be described as one unified phenomenon. This reveals that metonymy bridges literal and metaphorical expressions, which in turn reveals a continuum of literal/metonymic/metaphorical expressions with different conceptual levels.

Chapter 6

Conclusions

6.1 Summary

This study has set out to explore a fresh perspective on the understanding of figurative language. The definition of figurative understanding is still ambiguous, even though there is a certain consensus among cognitive linguists. However, there are also conflicting views with regard to details, since different kinds of figurative expressions have different features. Some scholars have tried to distinguish these different features in different figurative expressions, which leads to a more complicated identification process for interpreting figurative expressions. On the other hand, the present study returns to the essence of figurative expressions, which involves the meaning extension between vehicle and target. Generally, words in literal expressions are words in common or dictionary usage, while words in figurative expressions include words with meaning extensions, or words with additional layers of meaning. By using this fact as a new symptom, the thesis has tried to understand figurative expressions as a unified phenomenon.

The study presented in this thesis began by identifying the background of figurative expressions, which includes the breakthrough CMT theory (Lakoff & Johnson 1980) and other related views on metonymy and metaphors (e.g., Barcelona 2011; Croft 1993, 2002; Lakoff and Turner 1987; Languager 1993, 1999; Radden & Kövecses 1999, 1989). As determined by the literature review, metaphor has attracted many researchers, while metonymy had been ignored for a long time. However, since the cognitive mechanisms that this thesis provided for metonymy are used in an extended form for metaphor, in terms of this, metonymy is more of a fundamental feature in our conceptual creativity than metaphor. Relatedly, some researchers (e.g., Rarnden 2010; Dirven1993; Goossens 1990; Radden 2002 Ruiz de Mendoza & Díez 2002; Warren 1999) have since claimed that there are different types of figurative expressions that are less readily identified by the traditional accounts. They has been found that there is a literal/metonymic/metaphorical continuum at the conceptual level that shows that metonymic expressions can be widely spread between literal and metaphorical expressions. For example some metonymic expressions are also close to literal or metaphorical expressions. However, despite the fact that the researchers have explored the important linguistic evidence, they have

not shown the understanding mechanism (e.g., cognitive models). These kinds of expressions have not yet received a neat definition in the literature. In order to explore this ambiguity and identify figurative language more clearly, I set up two research questions, as seen below.

i) Is metonymy, in fact, a unified phenomenon? And how are metonymies motivated?
ii) How is metonymy related to other figurative expressions such as metaphor?

Since the traditional accounts of figurative expressions (e.g., domain approach) have failed to treat all types of metonymic expressions, some scholars have proposed that (figurative) meaning construction, in particular how linguistic vehicles access targets, should be more focussed on, rather than how two entities interact each other (e.g., Croft 1993, 2002; Evans 2006b, 2009a, 2010; Langacker 1987, 1993, 1999). This was discussed in the method chapter (Chapter 3). In fact, exploring meaning construction is a difficult task. There has been a long history of arguments regarding whether meaning is context-dependent (pragmatic) or context-independent (semantic). Looking at this in more detail reveals that there is some doubt that meaning belongs to its lexical item or is affected by grammatical form or non-linguistic information. To complement this issue and model the meaning construction of figurative expressions, I employed the LCCM theory (Evans 2009a, 2010). The theory claims that word meaning is protean, or in other words, that the semantic contribution of words can always be variable and dependent on the context. The utility of this model is that it helps elucidate the relationship between figurative language expressions and encyclopaedic knowledge during the course of language understanding. The theory models linguistic and conceptual knowledge structures as independent structures and shows how they interact in the process of constructing situated meanings, giving rise to sentence-level meaning. Therefore, the theory can more or less be compatible with both pragmatic and semantic ways of understanding. Based on this, I employed the theory in the thesis.

Chapters 4 and 5 considered the straightforward goals of providing an accurate treatment of metonymic language, determining the motivation of figurativity in the understanding process, and analysing the relationship between metonymy and metaphor. In Chapter 4, I addressed the question, 'Is metonymy, in fact, a unified phenomenon? and how are metonymies motivated? ' Following traditional accounts, I accepted three metonymic criteria: first, that metonymy is a conceptual phenomenon; second, that its vehicles and targets are strongly associated; and third, that its relationships are often described as A PART FOR WHOLE/ WHOLE FOR A PART conceptual relationships. Considering the question as a new factor of

metonymic understanding, I returned to the fundamentals of figurative expression: meaning shift. Each metonymic vehicle more or less extends its meaning to figurative meaning. This extended process is called conceptual distance (access route length), which leads to different levels of figurativity from different types of figurative expressions. As a result of focussing on the conceptual distance, I have found that figurativity is created by and depends upon the conceptual distance, which varies in different types of figurative expressions. In short, the conceptual distance can be a symptom of a unified phenomenon of metonymic expressions.

Before discussing metonymic expressions, I would like to briefly mention literal expressions. Consider this example: 'I bought a *car'*. In this case, the lexical concept 'car' affords access to physical aspects as well as to abstract aspects of the car, which cover most of the primary cognitive models of the car. At first, since the vehicle accesses the primary cognitive level, the expression does not have figurativity. The vehicle accesses most of primary cognitive area, this involves a relationship, called WHOLE FOR WHOLE in my thesis. In addition, the example does not involves metonymic cognitive structure, such as A PART FOR WHOLE/WHOLE FOR A PART conceptual relationship between the vehicle and the target, the example can be identified as a literal expression with WHOLE FOR WHOLE relation.

As for metonymy, there are three types of metonymic expressions: i) non-figurative, ii) figurative and iii) higher figurative metonymy. Non-figurative metonymy is an expression that does not involve figurativity (in other words, literal) but still holds metonymic cognitive structure, such as, for example, 'I vacuumed a *car'.* In this case, the metonymic vehicle 'car' accesses one attribute in the primary cognitive model, namely the interior of a car. This expression seems to be literal, but I would like to distinguish it from the other type of literal expression (e.g., 'I bought a *car*'). Therefore, I would say this is a non-figurative metonymy in this thesis. The next type of metonymy is figurative metonymy, in which a metonymic vehicle accesses a secondary cognitive model, which gives it figurativity (e.g., 'She bought *Shakespeare*'). The final type is higher figurative metonymy, in which a give metonymic vehicle affords access to a higher secondary cognitive model and receives higher figurativity (e.g., 'The *ham sandwich* has asked for the bill').

The linkage between a metonymic source (vehicle) and target normally survives in the operation. The strength of a metonymic link depends on how conceptually close source and target to each other but it may vary in strength (Panther & Thornburg 1998). I would say that non-figurative metonymies have strong metonymic link while higher figurative metonymies

have weak metonymic link since the conceptual closeness between vehicle and target based on the conceptual distance in a cognitive model profile.

However, conventionalised metonymic expressions are pervasive in our everyday lives. For example, 'The *kettle* is boiling' or 'She bought *Shakespeare'* originally analysed as figurative metonymy however both examples can be understood straightaway, without obstacles. Although some figurative expressions are conventionalised, an access point in the cognitive model profile is still the same as the original one. This is because primary and secondary cognitive models are not easily changed in a cognitive model profile. Instead, the route of access path tend to be changed in the cognitive model profile. This is because another cognitive route (different, omitted or shortened) has been established between a source (vehicle) and a target in cognitive model profile. As a result, that conceptual path somehow directly connect from vehicle and target.

Chapter 5 discussed the question of how metonymy is related to other figurative expressions such as metaphor. The two preceding chapters considered metonymic expressions and their meaning construction. The latest perspective on both phenomena attempts to treat them as being in a conceptual continuum (e.g., Barnden 2010; Dirven1993; Goossens 1990; Radden 2002 Ruiz de Mendoza & Díez 2002; Warren 1999). Scholars offer us linguistic evidence that there are various kinds of figurative expressions that are located in between metaphor and metonymy. However, they do not provide a complete understanding mechanism of those linguistic examples. Therefore, in this study, I have employed cognitive models to apply to these examples in order to complement previous studies and comprehend the expressions' understanding mechanisms from the LCCM perspective.

By employing the LCCM framework, I have found that there are several levels of figurativity in metaphorical expressions: i) primary level metaphor, ii) secondary level metaphor and iii) higher secondary metaphor. As for primary level metaphors, each source and target accesses a primary cognitive level, therefore, each lexical concept does not have figurativity but the matching occurs in across concepts, therefore, the sentence involves a metaphorical notion. That is to say, a prototypical/pure metaphor is more figurative as measured by access path lengths than a prototypical/pure metonymy is. While secondary level metaphor is so-called metaphorical expressions in the literature, in which source and target match with each other. Either source or target or both provide access to secondary cognitive level, therefore, the sentence involves figurativity, which is called secondary level metaphor in my thesis. The

last type is higher secondary level metaphor, which can involve higher figurativity than other metaphors and a figurative source accesses a higher secondary cognitive level. Either source or target, or both accesses higher secondary cognitive model, the sentence is called a higher secondary level metaphor.

In addition, the chapter investigated the linkage between source (vehicle) and target. There are several types of metaphorical expressions (correlation, referential), their linkage between source and target ultimately summarise as similarities, which involves the same or similar entities in each cognitive model profile and then both accessed points create a metaphorical matching. However, so-called emergent metaphors and figurative expressions that involve both metaphor and metonymy sometimes creates a new meaning in the utterance. This is not resemblance based metaphors. In this case, metaphorical sources and targets extend their meanings until they have a reasonable match with its cognitive model, but this depends on context. This type of metaphors tend to involve higher figurativity and extra-linguistic information support to be understood. As such, by observing different levels of figurativity, this chapter showed the conceptual spectrum between metaphor and metonymy. As mentioned before, approaching to a literal/metonymic/metaphorical continuum is not a new but this thesis account for conceptual continuum systematically by adopting LCCM theory although previous studies examine these phenomena in individual cases.

As for the mechanism, this chapter adopt LCCM theory as well as the notion of metaphor as double metonymy, which hypothesis that metaphor created by two metonymies that share the same of similar cognitive models in each source and target concepts. By using this mechanism, the chapter can investigate a meaning extension in each source and target and reveal the accessed point in each concepts. The accessed point make a metaphorical link. As mentioned above, most of metaphorical link based on some similarities between the two distinct concept except for emergent metaphors.

Finally despite the fact that, as shown in the traditional studies, the features of similarity and contiguity serve as an index to identify metaphor and metonymy, but this thesis found that, it is inevitable that the notions of similarity and contiguity apply to both metaphors and metonymies and both are just aspect of the figurative expressions, not the unique principle both figurative expressions. Rather, by observing the construction of meaning between a figurative source (vehicle) and a figurative target, the access route length is a more useful symptom to identify the ‘borderline’ expressions that cannot be identified as either metaphor or metonymy.

Therefore, apart from traditional approaches, an alternative perspective to figurative expressions are urgently needed and the thesis has provided a unique principle to identify figurative expressions as a unified phenomenon based on access route length.

6.2 Theoretical Implications

This thesis has proposed finer research into figurative language understanding than has been seen in earlier proposals (e.g., Barnden 2010; Feyaerts 1999; Goossens 1990; Peirsman & Geeraerts 2006). In particular, it has three cutting-edge research contributions to the field of figurative language. First, by using a contemporary theory of language understanding (the LCCM theory), I have added a framework for different types of figurative expressions at different conceptual levels and, as a result, provide a single indicator for analysing figurative expressions. Figurative expressions can be defined as a unified phenomenon in terms of their different levels of figurativity. Second, the present study has extended the LCCM theory to metonymic (entities) domains for the first time. It has also further explored how metonymy is both similar to and distinct from metaphor, even though this is not the original purpose of the LCCM theory. Finally, this thesis provides a theoretical architecture of the understanding process in figurative language and, in particular, the association between individual languages and different types of conceptual knowledge that can be shared among all individuals.

6.3 Limitations of the Study

This thesis considers the relationship between language and cognition from the perspective of cognitive linguistics. Linguistic content is generally invariant information for individuals in the same community, which is the starting point for interpretation of expressions. However, the access point as conceptual content might be different in different individuals. There are vast bodies of conceptual structures in a concept, and an access route and its length can be variable; therefore, even at the starting point, when a given linguistic content is the same, the final access point can be different. The study in this thesis provides a bigger picture of a theoretical framework that shares the understanding process of figurative expressions, but this does not mean that all people who live in a same-language-speaking community can share the same conceptual structures in concept, access route, access length and so forth.

6.4 Further Study

This thesis has revealed that there is a single symptom for the literal and figurative understanding process. It interprets different types of figurative expressions by showing the access routes of linguistic vehicles accessing an access site in non-linguistic knowledge. With regard to the understanding process, a conceptual relationship, such as A PART FOR WHOLE/WHOLE FOR A PART, works as a special concept and affects the way a target is approached. By going through a special concept, a vehicle can access a secondary cognitive level, albeit the level of figurativity does not change, as shown in Chapter 4.

In a similar way, I have assumed that a conceptual metaphor has the same effect as a metonymic conceptual relationship. Further study will consider how conceptual metaphors work in the LCCM framework. According to the LCCM theory, conceptual metaphor has a special cognitive level and does not affect the regular operation of the LCCM framework (see Chapter 3). Therefore, the LCCM framework can be seen as being compatible with CMT. However, there is still an open question of how CM works in (or connects with) two different conceptual domains, and how CM works differently in resemblance and emergent metaphors. I have assumed that conceptual metaphors are subject to the size of non-linguistic knowledge. Each lexical concept has different number of potential lexical concepts and has different number of conceptual structures. In the case that a lexical concept has vast number of conceptual structures and cognitive models, individuals will have the range of choice. At that time, conceptual metaphors help to single out an appropriate concept in the understanding process, they might be able to delete non-related potential cognitive models in a cognitive model (conceptual knowledge). I would like to explore when and how conceptual metaphors work in cognitive models and how they affect other cognitive models. Additionally, I would like to consider why our conversations sometimes fail. Open lexical concepts undergo LCCM operations, and an informational characterisation (concept) is selected from the LCCM operations, but our communication sometimes fails between addressee and addresser. When that happens, the vehicle accesses the wrong cognitive model and creates the wrong interpretation. I assume that conceptual relationships and conceptual metaphors are subject to the size of non-linguistic knowledge. I would like to explore when and how misunderstanding occurs, and how conceptual relationships and conceptual metaphors affect our understanding process.

The present study has a theoretically-based approach and considers the relationship between linguistic vehicle and target in non-linguistic knowledge, or the vertical relationship from linguistic vehicle to target in concept. In my next study, I hope to conduct empirical research (event-related potential [ERP] or other psychological experiment) in order to show how conceptual metaphors impact the connection between nodes in non-linguistic knowledge. In particular, I would like to study in further detail the way in which individuals cut off and add cognitive models, or horizontal relationships in conceptual knowledge. For example, I am interested in how a new entity adds a vast body of conceptual structures and how it disappears.

6.5 Conclusion

Despite the fact that there are many ways of understanding figurative expressions in the literature, the definition of how to understand them still remains an open question. In order to complement the literature, the present study has provided a fresh perspective on the understanding of figurative expressions with cognitive models, which is new insight for figurative language comprehension. Trying to account for the understanding process in different types of figurative expressions leads us to consolidate the relationship between language and mind. I hope the results obtained from this thesis provide some inspiration to other researchers in related fields.

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