METAPHOR THEORY: LANGUAGE’S WINDOW TO THE MIND

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To Portia, my little linguist:

Watching your language develop and cognition grow
has been more illuminating than anything
I have ever read in a book or heard in a lecture.
I can’t wait until you’re old enough to read this
and can share some metaphors of your own.
La metáfora posiblemente constituye una de las más fructíferas potencialidades del hombre. Su eficacia bordea la magia y parece una herramienta para la creación que Dios olvidó dentro de alguna de sus criaturas cuando la creó.

Metaphor is perhaps one of man's most fruitful abilities. Its power verges on magic and it seems to be a tool for creation that God forgot inside his creatures when he made them.

~José Ortega y Gasset
ABSTRACT OF THE THESIS

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Metaphor is not a linguistic phenomenon relegated to flowery prose, but a universal feature of everyday speech across the world's languages. Under the guidelines of modern Metaphor Theory as developed by Lakoff and Johnson, metaphor is not just a matter of language, but of cognition. That is, human thought is primarily metaphorical in nature and this is revealed through language. People understand complex and intangible phenomena (i.e. the target domain) in terms of something else (i.e. the source domain), which is usually grounded in bodily experience.

Using this framework, the mind is conceptualized as a place with a portal, a machine, a computer, or a workspace. Time, analyzed using corpus data, is understood as a finite, valuable resource, which can be ordered along a line, move, and has subjective qualities. Language is conceived as a clearly delimited, modular object that has properties of a machine, tool, or biological organism.

As metaphoric conceptualizations often refer back to other metaphorical conceptualizations, there is a need for some type of primitive or primary metaphors upon which others are built. Early research indicates that these might be those that are most entrenched in the human bodily experience. There is also an indication that these primary metaphors may be universal, though complex metaphors vary wildly. Empirical studies that either confirm or deny the psychological reality of metaphoric thought are scant and more research is needed in this area. The analysis of time using corpus data presented here is one such example that shows real world data is inline with scholars' intuitions.
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CHAPTER 1

METAPHORS: LOOKING AT THIS VIA THAT

Linguistics is, ostensibly, the study of language. However, in the last century, it has become increasingly clear that by studying the sounds, morphemes, words, sentences, etc. that comprise language, we have been able to get a glimpse into the inner workings of the mind. It is no accident that the emerging field of cognitive science owes just as much of a debt to linguistics as it does to psychology, neuroscience, or computer science (Miller 2002).

One of the earliest linguists to recognize that simply describing language is not sufficient to understand it was Sapir, whose landmark 1925 article ‘Sound patterns in language’ showed that the minute phonetic inventory of a language is not as fundamental as what the speakers perceive to be psychologically distinct. That is, the set of sounds people carry in their minds is more fundamental than the sounds that flow from their lips.

Sapir and protégé Whorf continued work analyzing the relationship between language and the mind, eventually developing what is known as the Sapir-Whorf Hypothesis. Described in detail by Whorf (1940), this posited that people’s thoughts are governed by language. Therefore, speakers of different languages will think differently. Although the strong form of the hypothesis has been largely debunked, it is still regularly discussed at universities to this day (McWhorter 2008).

In 1957, Chomsky published his highly influential book Syntactic Structures, the ideas from which were further developed in Aspects of the Theory of Syntax in 1965. The revolutionary aspect of his work was not just the formalization of the innate syntactic algorithms speakers possess, but also in the positing of different levels of language processing. He called these Deep Structure and Surface Structure (later D-structure and S-structure) (Chomsky 1965). S-structure has words and morphemes in their form and order
that is apparent to direct observation, with D-structure constituting a level of language closer
to a representation of meaning. In other words, Chomsky (1965) believed that there is
something happening at the cognitive level that was intrinsically married to language. This
sort of multi-layered mental processing was not limited to work in syntax. In the 1968 work
*The Sound Pattern of English*, Chomsky and Halle showed that phonological processing
occurs in much the same way as syntax.

The work of Chomsky and his followers has gone not unchallenged. However,
despite such challenges and the subsequent plethora of studies in various subfields that
ensued over the following decades, few linguists would claim that there is no link between
language and cognition.

An entire subfield of linguistics, called cognitive linguistics, developed around this
notion. This includes, but is not limited to, construction grammar (Goldberg 1995), cognitive
grammar (Langacker 2008), conceptualist semantics (Wierzbicka 1996), mental spaces
(Fauconnier 1994), blended spaces (Fauconnier & Turner 2002), etc. The basic tenet of the
cognitive approach, which differentiates it from formal approaches, is that it draws no
boundaries between language and other psychological phenomena. That is, linguistic
structure draws upon more basic systems and abilities that it cannot be separated from
(Langacker 2008). That does not mean that language is not an innate ability, but that it is an
integral aspect of cognition.

One of the more prominent areas of study in the vein of cognitive linguistics is
Metaphor Theory; however, the importance of metaphors is hardly a new idea. In 335 BCE,
Aristotle wrote in *The Poetics* that metaphor is the 'hallmark of genius' and that 'all people
carry on their conversations with metaphors' (Fauconnier & Turner 2002:17). Aristotle also
believed that metaphor could act conceptually to produce new understanding (Cameron
2003).
Over the following centuries, countless others have written on the subject. One notable example is from Grice (1975). His contention is that metaphor is a ‘particularized conversational implicature arising from flouting the first Maxim of Quality’ (Leezenberg 2001:104). Grice’s first Maxim of Quality is ‘do not say what you believe to be false’ (Grice 1975:46). So, if somebody says something like My daughter is the sunshine of my life, the listener will assume that the speaker is not saying something they believe to be false. However, daughters cannot be sunshine in the literal sense, so the listener will know that this maxim is being flouted. Therefore, the listener will extend their comprehension to mean that there are some features of sunshine that apply to daughter.

While Grice’s interpretation does give understanding to where the listener will look for an implicature, it does not address how metaphors are understood. It was the effort to explain this that led to a cognitive linguistics understanding of metaphor. This systematic analysis of metaphor, called Metaphor Theory, was first articulated by Lakoff and Johnson in their seminal 1980 work, Metaphors We Live By.

The intention of this thesis is to examine modern Metaphor Theory. I will first give an overview of how the theory works. I will then analyze three abstract phenomena, namely mind, time, and language, using a cognitive linguistics metaphorical analysis. Finally, I will address where Metaphor Theory needs to be developed further. In particular, I will discuss the primary basis for metaphor, its universality, and empirical studies.

If Metaphor Theory could be reduced to a single sentence, it would be ‘The essence of metaphor is understanding and experiencing one kind of thing in terms of another’ (Lakoff & Johnson 1980/2003:5). That is, our understanding of complex or abstract ideas is not direct, but rather uses something else as an intermediary and this is revealed through language. It should also be noted that we are talking about ordinary, everyday language here, not poetry or high literature (though these certainly use metaphor in a multitude of ways as well).
For example, people talk about their lives regularly. This is not a special topic that is discussed only in philosophy classes, but something that virtually every speaker of English has discussed at some time. Phrases like these are common (selected from Kövecses 2002:3):

- He’s without direction in life.
- I’m where I want to be in life.
- I’m at a crossroads in my life.
- She’ll go places in life.
- He’s never let anyone get in his way.
- She’s gone through a lot in life.

Given examples such as these, it is apparent that in English, we speak about life in the same way that we speak about actual, literal journeys. There are movement, direction, roads and crossroads, etc. That is, we speak about life by using the words inspired by our experiences with actual, physical journeys.

So, there are two elements to Metaphor Theory. Both are called ‘conceptual domains’, but that which is being understood is called the ‘target domain’ and that which is being referenced for the understanding is called the ‘source domain’. In the example above, ‘life’ is the target domain and ‘journey’ is the source domain. Using the convention of Lakoff and Johnson (1980/2003), this would be expressed as [TARGET DOMAIN] IS [SOURCE DOMAIN], or LIFE IS A JOURNEY for the metaphors above. This convention of using small capitals indicates that the particular wording might not occur as such in a language, but is the conceptual basis for all the metaphorical expressions listed beneath it (Kövecses 2002).

Now the question is, what is the nature of the source domain? What sorts or things are being used to conceptualize more complex things? It has been noted that source domains are not random, but tend to be directly grounded in bodily experience (Johnson 1987, 2007; Langacker 2008). The claim by Johnson (1987) is that all of the complex ideas, concepts, and categories that people have, from the mundane to the spectacular, are
understood in terms of what we have personally experienced, via the five senses we perceive the world through. Or, as Kövecses (2002:4) puts it, ‘a coherent organization of experience’ serves as the basis for our understanding of the target domain. The abstract is being understood in terms of the tangible.

Kövecses (2002) did a comprehensive survey and found that the most common types of source domains are the human body (e.g. the heart of the problem), health and illness (e.g. a healthy society, a sick mind), animals (e.g. He’s a snake), plants (e.g. she cultivated her interest in photography), buildings and constructions (e.g. His finances are in ruins), machines and tools (e.g. the machine of government), games and sport (e.g. He’s a heavyweight politician), money and economic transactions (e.g. save your energy), cooking and food (e.g. a recipe for success), heat and cold (e.g. an icy stare), light and darkness (e.g. She brightened up), forces (e.g. Don’t push me!), and movement and direction (e.g. inflation is soaring). It should be noted that this is by no means an exhaustive list of source domains, but rather the most common ones Kövecses found.

Lakoff and Johnson (1980/2003) delineate the list of source domains even further and give three kinds of conceptual domains: the structural metaphor, the ontological metaphor, and the orientational metaphor. In the original edition of their book, each of these were considered distinct, but in their 2003 afterword, Lakoff and Johnson acknowledge that any given metaphor can contain all three elements.

Structural metaphors are ‘cases where one concept is metaphorically structured in terms of another’ (Lakoff & Johnson 1980/2003:14). ‘In this kind of metaphor, the source domain provides a relatively rich knowledge structure for the target concept’ (Kövecses 2002:33). In the example above, LIFE IS A JOURNEY, the actual, physical journey provides the framework by which we understand life. So, if somebody says I’m at a crossroads in my life, this is understood in terms of an actual journey, most likely along a road. Movement along this road is interrupted by a crossroads and the traveler has the choice to go left, right, or
continue straight. Likewise, as a person progresses through life, they might be presented with opportunity A (i.e. turn one direction), opportunity B (i.e. turn the other direction), or continue doing the same thing (i.e. go straight). Just as a traveler has choices about which road they will take, a person also has choices about what they will do in life. The structure of the activity from the source domain is used to give structure to the target domain.

The second group is called orientational metaphors. According to Lakoff and Johnson (1980/2003:14), the cognitive function of these is to ‘organize a whole system of concepts with respect to one another.’ This has received the moniker ‘orientational’ because most metaphors that serve this function have to do with basic human spatial orientations. Some examples (from Kövecses 2002:36):

MORE IS UP; LESS IS DOWN:  *Speak up* please.  *Keep your voice down.*
HEALTHY IS UP; SICK IS DOWN:  *Lazarus rose* from the dead.  *He fell ill.*
CONSCIOUS IS UP; UNCONSCIOUS IS DOWN:  *Wake up.*  *He fell into a coma.*
CONTROL IS UP; LACK OF CONTROL IS DOWN:  *I'm on top* of the situation,  *He's under my control.*
HAPPY IS UP; SAD IS DOWN:  *I'm feeling up* today.  *He's really low* lately.
VIRTUE IS UP; LACK OF VIRTUE IS DOWN:  *She's an upstanding* citizen.  *That was a low-down thing to do.*
RATIONAL IS UP; NONRATIONAL IS DOWN:  *He couldn't rise above his emotions.*  *The discussion fell to an emotional level.*

According to Kövecses (2002), upward orientation tends to be a positive evaluation, whereas downward orientation is negative. Furthermore, orientational metaphors are not limited to an up/down paradigm as in the example above, but most assign a positive value to one end and a negative to the other. Therefore, 'whole, center, link, balance, in, goal, front are mostly regarded as positive, while their opposites, not whole, periphery, no link, imbalance, out, no goal, and back as negative’ (Kövecses 2002:36).

The third grouping has been named ontological metaphors. These ‘allow us to conceptualize and talk about things, experiences, and processes, however vague or abstract they are, as if they have definite properties’ (Knowles & Moon 2006:40). These
metaphors tend to attribute physical properties to non-physical or abstract entities. For example, ‘we have, acquire, or lose qualities and attributes such as beauty, wisdom, or reputation’ (Knowles & Moon 2006:41). The assigning of abstract entities as containers is also a common feature of ontological metaphors. For example, one can be ‘out of her mind’ and ‘in love’. In these particular instances, the relationship that one has to the metaphorical container reveals their mental or emotional state. Overall, this grouping is somewhat restricted as our knowledge about general types of objects, substances, and containers is limited in respect to the target domain. This is in direct contrast to the structural metaphor, which provides an elaborate structure for abstract concepts (Kövecses 2002).

To explain how the information from the source domain is understood in terms of the target domain, Lakoff and Johnson (1980/2003) propose that there is a set of systematic correspondences between these two domains, typically called mappings. In short, understanding a metaphor means that the mapping between the source and target domain is understood. However, little work was done on defining exactly how these mappings function mentally. In the field of cognitive science, however, the study of mental spaces (Fauconnier 1994) and blended spaces (Fauconnier & Turner 2002) provided a natural template for explaining how metaphors are understood.

Mental spaces are defined by Fauconnier (1994:16) as ‘constructs distinct from linguistic structures but built up in any discourse according to guidelines provided by the linguistic expressions.’ In other words, mental spaces do not strictly represent language. However, their structure is defined by it. One relatively elementary type of mental space is called an image-schema and is related to the orientational and ontological metaphors discussed above (Johnson 1987).

Johnson (1987) references a 1981 PhD dissertation by Lindner that explains the in-out orientation in our experience, understanding, and language. Lindner looked at 600 cases of the construction VERB + out and found that nearly all of them could be
systematically represented by three basic image-schemata (Figure 1, taken from Johnson (1987:32):

OUT\textsubscript{1} represents the out particle in verbs where the trajector (represented as TR in Figure 1) simply leaves the landmark (represented by LM in Figure 1), a ‘confined’ space in this situation, without any particular direction or end location. Examples of this would be, 

\textit{John went out of the bathroom} or \textit{Pump out the air}.

OUT\textsubscript{2} represents the out particle in verbs where the trajector leaves the landmark in a particular direction with a somewhat determined end location. Examples of this would be 

\textit{Pour out the beans}, \textit{Roll out the red carpet}, or \textit{Write out your ideas}.

OUT\textsubscript{3} breaks the expectation for \textit{out} as there is no confined space for the landmark. In fact, no landmark needs to be specified in an example such as \textit{The train started out for Chicago}.
So, if it can be assumed that speakers of English have internalized this image-schema for *out*, which is based on real world experience, then it can be used effectively as a source domain. This is apparent in something like *Let out your anger*. Here, the landmark is some sort of ontological container of emotions from which one can open to release the contents outwards as in OUT₁.

Structural metaphors, being based on more than just orientation or crude ontologies, are the most complex of Lakoff and Johnson’s three categories (Kövecses 2002). So, it would only follow that the mental spaces used to represent these are also more complex than those that represent orientation or object/containers. Fauconnier and Turner (2002) call these ‘blended spaces’ where structure from two mental spaces is projected onto a new space (i.e. the blend). ‘The blended space is formed from the other two [mental spaces] by merging connected elements into new, hybrid entities retaining some, but not all, or their properties’ (Langacker 2008:52). While blended spaces have other functions, they are quite useful for analyzing structural metaphoric understanding.

Let us revisit *I’m at a crossroads in my life* from above. A blended space of this metaphor could be represented by something like Figure 2. It shows that there are a number of mappings (represented by dotted lines) from the source and target domain to the blended space. The traveler and the person are linked, as are the directions of the road and the life decisions. (There is also a link between life and the road, which is interesting because the metaphors LIFE IS A ROAD or LIFE IS A JOURNEY can be represented by blended spaces of their own. Instances such as these can make blended spaces complex indeed as they can be easily compounded, limited only by the extent of our real world experiences.) So, this diagram shows the conceptualization of a scenario where a life/road comes to a crossroads, which leads in different decisions/directions, each of which the person/traveler is free to choose.
Figure 2. Blended space for ‘I’m at a crossroads in my life’.

Figure 2 begins to show how we can use the structure of our real world knowledge as a source domain by mapping features of individual elements to create an understanding of a more abstract target domain. As described above, our understanding of the metaphor comes from combining elements of the source and target domain to create a third, distinct mental space.

One important thing to realize about Metaphor Theory is that it is not about language use alone, but rather what language use reveals about cognition. Langacker (2008:36) describes metaphors as ‘a primary way of enhancing and even constructing our mental world.’ So, the weak version of the theory is that metaphors are used to give further definition to concepts already held. However, the strong version of the theory is that metaphor is the basis for abstract thought. The implications of this are quite large as it implies that the entire human mental world is metaphorical in nature.
On the basis of this introduction to the cognitive mechanics of metaphor, some examples can be analyzed. The following chapters will introduce three intangible, abstract phenomena, namely mind, time, and language, and describe how they are understood cognitively by examining common, everyday language. As with any intuition-based study of language meanings, the persuasiveness of the analyses presented herein rests on the extent that my intuitions are shared by readers. As Kövecses (2005:28-29) says ‘All we can legitimately claim is that what we do is offer hypotheses concerning certain metaphorical ways of understanding target domains on the basis of linguistic evidence.’
CHAPTER 2

METAPHORS ON MY MIND

The human brain is a 3.5 pound, pink mass of tissue containing 100 billion neurons and 160 trillion synaptic connections. Somehow within its perpetual state of electrochemical flux, our mental state is born. Scholars, scientists, and doctors have studied the brain for centuries, yet there is only a rudimentary understanding of how it can create consciousness, logic, memories, language, and a myriad of other functions. However, it might be possible to get insight into the mind through linguistic devices. As we saw in chapter 1, one way in which we can learn how we conceptualize abstract things is through an examination of metaphor in everyday language. For analyzing the mind, this is an extraordinary situation because the very thing that is being examined is also the examiner!

So far, little comprehensive work has been done on understanding the mind through metaphor. In several works, there have been casual mentions of the mind (Kövecses 2002, Lakoff & Johnson 1980/2003), which often are provided without justification. Others have considered a single, extensive metaphor of the mind (Sweetser 1990). However, I could not find a single work devoted to this topic, so it is my intention here to catalog the observations that have been made, justify the metaphors, add new observations of my own, then attempt to induce a greater picture of mind metaphors. In the end, I hope this will provide a window to the mind, which brings us to our first metaphor…

THE MIND IS A PLACE ACCESSIBLE BY A PORTAL. We think of the mind as a place that is accessible via a portal. Amazingly, I could not find mention of this anywhere despite such clear linguistic clues. The title of this thesis refers to a window to the mind, i.e. something that enables us to see the ‘inner workings’. Aldous Huxley, after his numerous experiments with hallucinogens, wrote a book about the experience called The Doors of Perception in
1954. He is conceptualizing a door to the mind through which he could cross to gain a better understanding of himself.

There are also numerous examples in everyday usage. Suppose there are two people, one of whom is set in his ways and doesn’t welcome a new viewpoint while the other is ready and willing to accept something new. These people are closed-minded and open-minded respectively. The mind is being portrayed as having a portal through which new ideas, information, and experience can pass. If one does not wish for this, then the mind can be closed. Or, the person could be slightly interested in new things, but not completely. So, this person is narrow-minded. The portal of the mind is not just a binary operation of open or shut, but can take on an intermediary position as well.

The speed through which things pass through the portal can be used to encode various mental states as well. For example, I couldn’t sleep last night with all those thoughts racing through my mind portrays a type of anxiety. A sudden realization or burst of thought can be conveyed with flashed through my mind (e.g. After I saw her again, all those memories flashed through my mind.) If the thoughts are whimsical, then they can dance through the mind as in Wild thoughts danced through my mind. There is also the more neutral go through my mind, which conveys a continuous thought process (e.g. The images of the sunset were going through my mind.) Basically, we have a pattern of [thoughts/images/memories/etc.] <verb of motion> through my mind where the nature of the verb reveals the nature of the mental activity. In other words, the verb is being used metaphorically to describe THE MIND IS A PLACE ACCESSIBLE BY A PORTAL metaphor.

These through my mind constructions have similar senses in meaning to in my mind constructions. For example, one could just as easily say Wild thoughts danced IN my mind and retain the same denotation (though the connotation might be slightly different). The mind is a place where thoughts, images, memories, etc. are free to roam about.
THE MIND IS A CONTAINER. Both Lakoff and Johnson (1980/2003) and Kövecses (2002) mention that the mind is conceptualized as an ontological container. For example, like any container, the mind can be filled, *My mind is full of information*, and conversely, it can be empty, *You need to clear your mind to meditate successfully*. We are also aware that people have their own mind containers, so if we want to know what somebody is thinking, we can ask *What do you have in mind?* There also seems to be functionality outside of this container as well, such as the top. Another inquiry about another’s thought process is *What’s on your mind?*

Things, such as ideas, can also move to this container, as in *Several ideas came to mind.* Or they can just move past it (e.g. *Several ideas crossed my mind.*) to show less commitment. Conversely, if you want to show greater ownership, the container can also be the origin of the trajectory, such as *Those great ideas came from my mind* or *The funniest things come out of his mind.* (Though, one should be careful with that particular phrase because it came mean something very different when used with a copula, as in *He’s out of his mind!* This is interesting because it is portraying sanity as being in the mind container and insanity as being out of the mind container. This can be shown by completing the paradigm, *He’s in his right mind.*)

There also appears to be some sort of spatial organization to this container. For example, one often hears things like *It’s been in the back of my mind* to show that the content is not in the most salient position. This is reminiscent of what Chafe (1987) calls the ‘semi-active category’.

It is also possible to use this container as a workspace. With things like *I wrote a letter in my mind* or *I practiced the speech in my head* we see that there is a conceptualization that the mind is a place where things can get done. If somebody is particularly good with numbers and doesn’t need scratch paper, that can be expressed as *She added up all those numbers in her head.*
MIND IS A MACHINE. Perhaps the most pervasive metaphorical conceptualization is that the mind is a machine (Kövecses 2002, Lakoff & Johnson 1980/2003). It is very common for people to discuss the workings of the mind, e.g. *I like the way your mind works.* *My mind isn’t working today.* *Her mind works in strange ways,* etc. Like a machine, the mind has working parts, e.g. *The gears are really turning now.* Likewise, *ideas* are used in a similar capacity where the ideas are the parts of the mind machine as in *Your ideas are really coming together.* That is, the *ideas* are starting to function together as if parts of a machine. But, if some of those parts are absent and mental functioning is severely limited, this situation could be described as *He’s not all there.*

Besides missing parts, the mind is also subject to mechanical problems like any other machine. For example, you could simply say *My mind isn’t working right today* to convey a temporarily diminished mental capacity. If that situation were more permanent, one could say something like *She’s a little slow.* The diminished capacity could also be described in more definitive mechanical terms. For example, if you haven’t spoken French in awhile, you could describe the situation with *My French is a little rusty.* In all situations, the problems with the machine are understood as problems with the mind that interfere with full functionality.

Sometimes the machine has gone beyond a diminished functionality and has stopped working completely. Once again, our simple use of *working* can be applied again as in *After midnight, my mind stops working.* Similarly, one could also say *After midnight, my mind shuts down* to convey the same meaning. In both, the cessation of the machine is the equivalent of the cessation of thought (even though this is not a true, real world possibility, i.e. to utter those phrases the mind must be working at some capacity.)

Other times, the situation is a little more severe and the machine was not shut down, but rather broke down. It is a very common expression to explain one’s sudden
psychological problems with *He had a mental break down*. There are many more similar expressions, but these will be covered in the next section.

**THE MIND IS A DAMAGEABLE OBJECT.** As we saw above, the mind can be seen as breaking down just as a machine would. However, there are many more expressions which can convey this same meaning, but without using the machine metaphor in the strict sense. For example, the mental breakdown can also be described as *He cracked* or even *He just snapped*. For these, the mind is being portrayed as an object that can be damaged if handled wrong. Indeed, even the fact that I can talk about how *the mind is being handled* shows this. As with any fragile object, it needs to be handled with care. (Conversely, we can talk about somebody being *strong minded*, which might seem to go against this characterization, however explicitly pointing out that the mind is strong shows that it is not in its usual, damageable state.)

The breakage can be even more severe as in *After all that trauma, his mind is shattered*. This is interesting because the nature and severity of the breakage reflects the nature and severity of the mental damage. Just as a crack is less severe in damage than a shattering, a *cracked mind* is less severe than a *shattered mind*.

The above are examples of what has been called the **MIND IS A BRITTLE OBJECT** metaphor (Lakoff & Johnson 1980/2003). But, I contend that this just part of the damage that can occur, so I propose a broader **THE MIND IS A DAMAGEABLE OBJECT** as there is more than just breaking, snapping, or shattering that can go wrong. Consider a young man who has just been dumped by his girlfriend. This situation is commonly described by something like *He was crushed!* His emotional state was so damaged, it interfered with his ability to function at full mental capacity. This is of interest because it also involves the **DOWN IS UNFAVORABLE** metaphor mentioned in chapter 1. Similarly, if one is exposed to, for example, prolonged isolation, it could *warp their mind*. The curvature here represents a permanent damage to an otherwise flat, healthy mind.
The mind can also be damaged in other ways as in *I saw that chart so many times it has been etched into my mind* or *It was an amazing sight that will always be burned onto my mind.* These particular two are interesting in that they do not necessarily denote something bad happening as all the other examples in the category have. They also indicate that the mind is a like a board or surface onto which things can be written or depicted.

**THE MIND IS A MALLEABLE OBJECT.** In the section above, we saw that the mind is an object that can be damaged. However, this is not the only way in which to alter this metaphorical mind object. It can also be adjusted. How often, for example, does one hear *I changed my mind?* The mind, in this case, is something that can be easily adjusted.

However, the change to the mind can also be something more laborious. Many academic institutions claim to *mold the minds* of their young charges. Similarly, many religious institutions offer help on how to *forge your mind* for the challenges it will face.

**THE MIND IS A COMPUTER.** Surprisingly little has been written about the conceptualization of the mind as a computer, despite the fact that this metaphor is quite fitting. It is difficult to talk about the mind without something from this source domain popping up. For example, *processing information* or *processing data* in its unmarked state could easily be applied to either a computer or the mind. Likewise, with a processing overabundance, both the mind and a computer become *overloaded.* Or, if something doesn’t make sense, we can simply say *That does not compute.*

Like a computer, the mind also seems to have different types of memory. For example, if one were to say *clear your mind,* the idea is not that the addressee should eliminate everything in their mind. Rather, just the immediate computational area of the mind should be cleared. This is analogous to computer RAM (random access memory) rather than its hard drive memory. RAM is also called ‘working memory’, so it is where the workspace is located that is mentioned above in sentences like *I wrote a letter in my mind* or *She added up all those numbers in her head.* That is, just as a computer has a large
memory capacity as well as an immediate working memory capacity, so does the mind. These are often called long-term and short-term memory, respectively.

Just as a computer has a programmer, we also think about external forces altering the thought processes of a person. Suppose your uncle joins a cult, then gets pulled out by well meaning family members. He will not be able to rejoin society immediately, but first must go through deprogramming.

This particular metaphor is interesting in that the other direction can apply as well, i.e. A COMPUTER IS A MIND. That is, the computer and the mind can be either the target or the source domain. It is common to talk about the computer as a cognizant entity with things like It’s thinking right now and It doesn’t understand what you’re trying to do. Indeed, this very conceptualization is at the basis for artificial intelligence where the computer is being improved upon to the point where it can think similarly to a human.

THE MIND AS BODY. Sweetser (1990) did some very interesting work examining how the body, specifically the senses, can be used as a source domain. As she says ‘the MIND AS BODY metaphor is very probably motivated by correlations between our external experience and our internal emotional and cognitive states.’ (Sweetser 1990:30).

So, we get things like ‘knowing is seeing’. When somebody says I see, it is usually considered to be a confirmation of understanding, not about actual work being done by the eyes. If the information is just being received, then the sense of hearing is employed. That’s why I hear what you’re saying isn’t a statement about aural perception, but about comprehending the intent of the other person, even if it’s not completely agreed upon. Similarly, we use the sense of touch to talk about emotion. This is actually heard very commonly with How are you feeling? Again, this question is not about actual tactile sensation, but about the emotional state of the mind (or physical health). Likes and dislikes are expressed with the sense of taste, e.g. He has good taste in music. Sweetser doesn’t mention the sense of smell, but that is used as well. When you hear That stinks!, you can
probably assume that somebody is displeased with something, not a malodorous object nearby. (Though it is interesting that the opposite does not work. You cannot say *That smells good!* to show your pleasure with something. Kövecses (2005) notes that the inability to explain expected metaphors is a valid critique of the theory.)

To conclude, we have seen that the mind does have a particular characterization of itself. The mind is a container of sorts and can hold all kinds of things, though ideas, thoughts, images, and memories seem to be the most common. This container can be accessed through a portal to facilitate the transfer of the mental contents as well be used as a workspace. In an alternate conceptualization, the mind is seen as a machine, both in the classical and digital sense. As with any machine, it is subject to being damaged. There is also an inherent relation between the bodily senses and mental perception.
CHAPTER 3

IT’S TIME FOR METAPHORS

Time is a complicated thing. From the ancient Greeks to the quantum physicists of today, nobody has ever really been able to give a definitive description of what time is, yet despite its enigmatic status, time has easily woven itself into the tapestry of daily life. Indeed, our lives are ruled by the clock and calendar. It has entered our vocabularies and the word has become such a commonly encountered lexical item, it almost borders on the mundane. Oddly enough, it is through this ordinary use of language, specifically metaphoric language, that we might be able to gain some insight about this phenomenon. While this will not lead to an absolute understanding of time, it can show how speakers of English conceive of something so enigmatic.

The usage of *time* in English is a bit idiosyncratic as there is no lexical distinction between a point in time and a more general period of time. For example, there was the *time* that Abraham Lincoln was assassinated during the *time* of the Civil War. The assassination was an occurrence whereas the Civil War was a period of time. Other languages make such a lexical distinction. French, for example, uses *fois* for an occurrence, but uses *temps* for a more general period. There is also a third sense of *time* in English that is synonymous with ‘experience’, as in *I had a good time watching Yo Gabba Gabba with my daughter*. To further complicate matters, the prototypical instantiations of *time* as an unspecified period are mass nouns whereas the prototypical instantiations of *time* as a single event, a period of time, or an experience are count nouns.

However, trying to classify *time* as either a mass noun or count noun isn’t as distinct as one might assume. The problem is that when you break a mass *time* into smaller units, you still get *time*. This sort of ambiguity is exactly what is predicted under a cognitive
linguistics analysis such as cognitive grammar. For example, Langacker says that the mass/count noun distinction is ‘anything but a rigid lexical opposition such that a given noun definitively belongs in one or the other category’ (Langacker 2008:131). It is his contention that the mass/count noun distinction is symptomatic of the construal of an underlying conceptualization rather than being based on its subjective reality.

In the cases here, we are looking at the underlying metaphoric conceptualizations that are used to understand time. The interesting thing is that in its metaphorical usage, English often treats each sense of the noun in a similar way. That is, all three senses, whether mass or count, can, but not always, appear under the same metaphorical heading. Throughout the text, the mass and count senses of time will be explicitly listed.

Until now, virtually all work done on metaphor has been through introspection by the writers. That is, they examine their own use of language then subsequently analyze and categorize what they pull out of their heads. This particular approach worked well for formal syntax for many years, but has now fallen out of favor with a new preference of using actual real world data. Semino (2008) and Deignan (2005) have a similar criticism of metaphor analysis. They note that until now, we have to take the authors’ word at face value and it isn’t really known how much their analyses reflect actual usage of language. However, a corpus-based method has not been thoroughly tested. For example, Semino (2008) offers an analysis of Lakoff’s assertion that A PURPOSEFUL LIFE IS A BUSINESS by looking at ‘rich life’, which Lakoff asserts is a common term. Semino, however, found that the usage of this particular pattern is very limited in corpora, so using it as evidence might not have the weight it appears to have. So, Semino encourages the use of corpora in future metaphor analyses. It is my intention to do that in this chapter.

So, instead of just using my intuition, I retrieved all my data from a corpus. I used the British National Corpus (BNC) (2007), searching simply for the lexeme time. For spoken and written English, there were 154,480 matches out of 97,626,093 total words (giving a
frequency of approximately 1 out of every 632 words). This was, obviously, too much data to look at, so I used the thinning feature provided on the BNC to select 1000 random sentences containing the lexeme time. I then took this data, analyzed and categorized it, then compared it against what has previously been written on metaphors of time as reported by Lakoff and Johnson (1980/2003) and Kövecses (2002).

TIME IS POSSESSABLE. Surprisingly, I could not find any mention of time being ontologically possessable in the scholarly literature despite there being an abundant amount of examples in the corpus. We can see that the possession can be as simple as having it or not having it:

(1) You **have time** to digest the unexpected worm, as they say about early birds!

(2) I **had no time** for my father’s illusions.

Time can be possessed by me or you or him or her or us or them. Or, it just might belong to everybody. These are examples of time as a mass noun being possessed:

(3) These, then, were some of the issues that took **my time**.

(4) So the demands on **your time** to speak at a wide range of institution meetings and dinner functions are legion.

(5) It was a great pleasure to meet the team of authors and please thank Susan Parks for giving up so much of **her time** to devote to going through the manuscripts.

(6) Without wishing to detract from the impact of the number of dogs put to sleep weekly by the RSPCA, it must be realised that this number would be much higher if vets themselves did not also spend much of **their time** carrying out euthanasia.

(7) So you’re not messing around and wasting everybody’s **time**.

Possession can apply to time in its count noun sense as well. These denote finite periods of time:

(8) Compared with the other great all-rounders of **his time**, Imran Khan, Richard Hadlee and Kapil Dev, he is certainly the best batsman and best slip fielder, but Hadlee and Imran are more dangerous bowlers, and much less likely to have a bad day.

(9) Lermontov, for his part, was a character out of Byron, and so was Pechorin, the ‘hero of **our time**’ in Lermontov’s novel of 1839, one of those people ‘who are fated to attract all kinds of unusual things’.
However, that possession might not be permanent as it can be distributed, taken, or even stolen. These are all examples of *time* as a mass noun:

(10) *After she retired from the headship of her department in 1920 she gave much time to various women’s groups and to societies for the promotion of women’s interests.*

(11) *Not neurotic, that, just a way of parceling out the time, and doing everything I need to.*

(12) *Each man took time to compliment her hair, her face, her clothes, her figure.*

(13) *She stole the time to brush them clear with the side of her hand then slipped back inside, hoping no-one would notice her.*

**TIME IS A RESOURCE.** Perhaps the most pervasive analysis of time metaphors is **TIME IS A RESOURCE**, as has been discussed extensively by Lakoff and Johnson (1980/2003) and there is ample evidence for this usage in the data.

Resources are something that is needed for something else and can be created, but ultimately, the amount of the resource is finite. It can either deplete naturally, or simply be discarded. In these examples, time is a mass noun. This is unsurprising considering that many other resources are mass nouns as well (e.g. water, electricity, wheat, gold, etc.):

(14) *Strong friendship takes time to build.*

(15) *In most happy marriages, husband and wife continue to make time to be with each other, and to understand each other.*

(16) *At 31, Tamworth-born Coton is running out of time to establish himself with England.*

(17) *No time wasted, away within seconds at top speed.*

This particular metaphor can be refined even further. Time is not just a resource, but also **TIME IS A VALUABLE COMMODITY**. It can take on the properties of precious metals and, like other valuable commodities, it can be bought. In some cases, you might even have more than you need or you might get lucky and have some without having to pay anything. Again, these are examples of *time* in the mass noun sense:

(18) *But if disaster is to be averted, time bought needs to be put to good economic use.*
(19) Exhausted by long hours of study at night, and finding it impossible to publish any of the poems he had been writing in his spare time, his health and spirits began to suffer.

(20) So, in theory, someone of my age had half an hour of free time, although it was in fact impossible to find any place where one could be alone.

The count noun sense of time as a finite period can also take on this property of value:

(21) The airmail letters which he exchanges with his liberal friends in England tell a worse story of them than they do of him, and hark back in fine style to that golden time when such friends used to kneel in London mosques with Michael X and other celebrities, squinting up at the Heavyweight Champion of the World's effulent arse.

There is another valuable commodity that time is compared to so frequently that it has entered into the adages of the language, TIME IS MONEY. Indeed, this conceptualization has become so pervasive, that even when people are talking about time being money in the figurative sense, it is still spoken about as if it were literal:

(22) Plan everything to give time-saving efficiency, for you will need it -- time is literally money in these circumstances.

Despite misunderstandings such as the example above, time is truly discussed as if it were money. Like money, time can be spent, saved, borrowed, or economized. Also like money, time is these examples are mass nouns:

(23) In the next few days Mary spent almost all her time in the gardens.

(24) I just thought it would have saved time.

(25) The Government is living on borrowed time, Liberal-Democrat leader Paddy Ashdown warned.

(26) It is suggested that the specific objectives of any given test be clearly identified before the test is started, since only if the objectives are clearly defined can the test be carried out most efficiently and with the greatest economy of time and effort.

TIME IS DIMENSIONAL. Time comes in many different sizes and quantities. It can be long or short. Given the finite nature of dimensional objects, it is of little surprise that time in these examples is construed as a count noun:

(27) Some have been living for a disconcertingly long time in museums; but once doubted, the evidence of inadequacy in a fake is quite often soon in coming.
We do not know yet whether he wants to extend his visit for a short time to see friends, or become a student, or stay permanently."

But, even the mass noun sense of time can be divvied into a little or a lot:

She had, however, little time to be surprised at this sensuality, for more careful listening revealed that the words were all about hell-fire and damnation.

The suit was as unpretentious as it was expensive, carefully cut around a body that had spent a lot of time in a gymnasium.

Furthermore, as a mass noun, it can be quantified and matched for size or it might be much more than is needed. Like any substance that is broken up, it has borders:

The workers have been on duty for the same amount of time whenever measurements are made.

It was what she saw as the excessive time and attention given to the ‘South Bank’ theologians which she objected to most strongly.

Malraux’s books, like thousands of picture books since, emphasize details and similarities across boundaries of time and place.

There are also a lot of different ways in which the pieces from the mass of time substance can be grouped. Often, it uses the same language as for physical or spatial dimension. This is unsurprising for an ontological metaphor such as these:

The biggest changes are in the length of time people ill with the disease are now surviving and in the nature of the illnesses themselves.

Within a short space of time referrals were regularly coming in.

Any investigation which covers a long span of time is bound to encounter certain special problems.

He had lived with his past for the best part of fifty years, and his book tells what he had come to know of it over that interval of time, with help from the theories of Marx and Freud.

This could, depending on the gravity of the matter, suspend the individual from practice for a period of time or even permanently.

Time is a referential object. Time can be spoken of as an object with multiple occurrences. A such, we can talk about time in terms of this, that, and the other. Or it might simply be the same time object. These refer to a particular point in time, so it takes on the count noun sense:

In 1988 Lord Scarman perceptively observed that the momentum created by the democratization of Parliament was a major factor behind the marked increase in executive power at this time.
(40) I went to him for the political because I was a red hot loyalist at that time.

(41) Picnics are the other time that salads are king.

(42) At the same time, the novel finds more to object to in the less objectionable aspects of these activities than many readers might anticipate.

It is probably unsurprising that time objects can be referred to in terms of where they are on a timeline:

(43) It’s past time now for things to happen.

(44) My success up to the present time has been greater than I could have anticipated both as regards obtaining much information that is entirely new as well as in bringing together one of the finest collections that has ever been formed.

(45) The maintenance of structures with intumescent coatings should be carefully considered, particularly if there is a risk that the covering may be removed at some future time in the life of the building.

TIME IS AN ORDINALABLE OBJECT. Ontological time objects can be put in order, as if on a line. Given that we are construing time as finite, rearrangeable bits here, it is unsurprising that these are count nouns:

(46) An enormous amount of work has been done and perhaps still more remains to be done in arranging works of art in exact sequence of time.

One can talk about the object before, after, or next:

(47) Lincoln brought in the big guns of William Temple to get bishop and rector to release the curate before the time.

(48) We’re working on the assumption that it was shortly after the time agreed for the rendezvous -- midnight.

(49) Next time I will simply invite the burglars in.

So, it is only natural that the time objects can be lined up and counted:

(50) It was the first time our national and international network had gathered together in one place and made us all realise just how much the work has grown.’

(51) Cambridge survived a frantic succession of alarms and excursions to win the 108th University Match and lift the Bowring Bowl for the second time in five seasons at Twickenham yesterday.

(52) Mr. Papandreou, aged 70, is under increasing pressure to reach a compromise solution with his political opponents as Greek voters have no desire to go to the polls again for a third time in less than six months.

(53) Again we had to view the signs of mourning at Todmorden Hall, the fourth time within four short years -- and now alas! all looked more melancholy than ever.
Interestingly, both senses of *last* can also be applied to the sequenced time object. That is, *last* can refer to either the previous occurrence or the ultimate occurrence:

(54) *But with the process of assembling Lebanon’s surviving deputies having been so difficult last time, a repeat performance seems to be impossible.*

(55) *I’m telling you for the last time, Harvey.*

TIME HAS MULTIPLE COMPONENTS. Time is not simply elemental, but can also have a number of different parts. One can talk about the whole time or some proportion of part of the mass time substance. These are similar to the examples given in 34-38 in that they divide up a mass, but these deal with parts of a whole, not dimensions:

(56) *In my mind the whole time there is the simple question, ‘What is it the music is supposed to say?’*

(57) *Part of the time he may almost be unaware that he is speaking to another person -- after all Gila doesn’t understand English very well and it is unlikely that she would fully understand the references to Rupert Brooke and the poem ‘The Old Vicarage, Grantchester’.*

(58) *Only one symptom, a persistent cough, was reported more often for those who had not been in a residential home -- 24 per cent compared with 10 per cent of those who had spent some time in such a home.*

(59) *I thought I managed very well considering that tears were running down my cheeks most of the time.*

Within the mass of time substance, it appears to be comprised of things like moments and points:

(60) *Any horrors waiting for him in the future were compensated by this moment in time.*

(61) *I’m delighted and I’m sure you’ll be delighted to hear the advice of the business convenor that we suspend at this point in time.*

TIME IS IN MOTION. Kövecses (2002) notes that time is something that can move. It can come and go or it just might pass by. These are all construed as a mass noun, similar to something like *water*:

(62) *Time moves on for all of us and the next day we were homeward bound, hoping, like Peer Gynt, to return some day.*

(63) *I think time will come when we will have to.*

(64) *As time goes by, the world becomes filled with the most powerful and ingenious replicators.*

(65) *This really denotes the passing of time.*
Like many things in motion, the speed is not a constant. It can be quick or it can slow:

(66) *It all comes together in a thrilling rush, and the time goes quickly.*

(67) *Luncheon was produced in double-quick time, a light snack of herrings; la Broadstairs, pies and salads.*

(68) *Isn't there ever a time when time slows down?*

**TIME HAS CHARACTERISTICS OF VALUE.** Time is not neutral, but rather can be assigned characteristics of value. Though, these all apply to the ‘experience’ sense of time, and therefore, are construed as a count noun. It can have a positive characteristic:

(69) *A good time for orientation in the academic or school library is the beginning of the academic year when students are being introduced to all the available facilities.*

(70) *So this last time she wanted to be in her office, correct and professional at the right time.*

(71) *You know, in the quiet of your own bedroom, plus <unclear> is a very useful time to try and learn things.*

But, time having negative characteristics seems to be much more common:

(72) *Forest are having a bad time -- they've lost six matches without winning.*

(73) *Esther had quite as hard a time of it as Annie, one might feel, but even so, Moore's spirited novel can be thought to settle for an anodyne poverty.*

(74) *Summer holidays arrive at just the wrong time for gardeners.*

(75) *I think you have to look after people both at work and when they retire and we inflation-proofed our pension scheme during the whole of that pretty dreadful time when inflation was running at over twenty per cent.*

(76) *From just £6.95 a month the Sun Alliance Personal Accident Plan gives you the reassurance of large cash payments at a most difficult time -- when you may no longer be able to earn a living yourself.*

(77) *Geoff Wildinson, assistant director for filed work, recognises the SSD is in for a tough time.*

**TIME IS A HEALER.** Kövecses (2002) notes that time can be personified. He lists personifications such as a destroyer, devourer, pursuer, reaper, a thief, or an evaluator. I did not come across any of these in my data set, however I did find one that Kövecses missed, a healer. I find that odd because there is even an adage in English that ‘Time heals all wounds’. This personification showed up as a mass noun:

(78) *Time had to a very large extent proved the cure he needed.*
(79) **Time heals** griefs and quarrels, for we change and are no longer the same persons.

From the 1000 sentences (distilled to 79 here), we get a picture of time primarily as a substance. *Time*, construed as a mass noun, is a possessable resource of value that has multiple components, has dimensions, and is in motion. It also has the power to heal. As a count noun, *time* is also a possessable resource of value with dimensions. However, it can also be a referent, placed in order (especially on a line), and can be assigned characteristics of value.

So, how does this match up with what Lakoff and Johnson (1980/2003) and Kövecses (2002) said? Lakoff and Johnson described time as:

- A kind of (abstract) substance
- Can be quantified fairly precisely
- Can be assigned a value per unit
- Serves a purposeful end
- Is used up progressively as is serves its purpose

From the data above, only some of this has been supported. In the corpus, time seems to indeed be a substance. We did not see much of a precise quantification, but I suggest that that is due to the search term I limited myself to. Had I included things like years, days, hours, milliseconds, etc., I most likely would have seen what Lakoff and Johnson concluded. Likewise, we saw that time can be assigned a value, but not really a value per unit. Again, this could be due solely to my limited search terms. We also did not see anything about a purposeful end, but that could have just been the luck of the draw for the 1000 sentences analyzed. However, in our initial section where time is discussed as a resource, we do see ample examples of time being used up progressively.

Kövecses (2002) concentrates on two aspects of time, its personification and its movement. As was discussed in the TIME IS A HEALER section above, the personification of time did not really show itself in this corpus and the one personification that did, was
neglected by Kövecses. However, we did find a good deal of evidence for time being in motion.

So, it would appear that it is useful to use corpora in the analysis of metaphor as actual language usage might vary from perceived language usage. I would suggest using introspection as a starting place, then refining these conceptualizations by using actual data. (It should also be noted that different corpora might yield different results, so this should be kept in mind for future endeavors.) Perhaps it would be most useful to concentrate on the most linguistically salient items when constructing a metaphoric conceptualization. One does have to wonder how fruitful it would be to concentrate on a rare usage when more common usages are being ignored.
Language is deeply entrenched in modern society as evidenced by entire university departments devoted to different aspects of it, charged political discussions over how it should be taught and tested, government agencies devoted to monitoring it, etc. However, its importance is nothing new. Language has been at the forefront of society since humans first emerged from the mists of time. Indeed, anthropologists will tell you that it is not the intellect of humans that allowed the domination of so much of the world, but the ability to use language to express and communicate this intellect (McWhorter 2003). The very foundation of society is interaction and cooperation, activities facilitated by language.

If the goal of linguistics is to truly understand language, then the way in which we conceive of something so intangible must be considered. Language is spoken of so facilely by professionals and lay people alike, it is easy to forget what an abstract entity it is. We are at a particular disadvantage here because the tool we are describing cannot be employed without said tool. As Harris (1991:274) said ‘There is no way to define or describe the language and its occurrences except in such statements said in that same language or in another natural language. Even if the grammar of a language is stated largely in symbols, those symbols will have to be defined ultimately in a natural language.’ That is, language must be used to analyze what language is. In many ways, it was an analysis of the conceptualization of language that led to modern metaphor theory. Lakoff and Johnson claim that it was Reddy’s 1979 article on how language and communication are understood metaphorically that first inspired them to develop their theory (Knowles & Moon 2006). Given the historical significance of that article, it will be discussed first.
THE CONDUIT METAPHOR. Reddy noted that in English, we have certain, predisposed ways in which we discuss language (and communication by extension) and formulated four major features (Reddy 1979:290):

1. Language functions like a conduit, transferring thoughts bodily from one person to another.
2. In writing and speaking, people insert their thoughts or feelings in the words.
3. Words accomplish the transfer by containing the thoughts or feelings and conveying them to others.
4. In listening or reading, people extract the thoughts and feelings once again from the words.

In other words, we put our thoughts into little language packages, which are then sent to another person’s head, where they are unpacked to retrieve their meaning. (Note that using this metaphor entails the usage of the MIND IS A CONTAINER and the MIND IS A WORKSPACE as was discussed in chapter 2. As mentioned earlier, many metaphorical understandings rely upon other metaphorical understandings.) Reddy’s research indicates that as much as 70% of English expressions about language used this formulation.

Examples of the conduit metaphor are certainly easy enough to find in common expressions. We regularly discuss language as a way to get our thoughts across. Conversely, if somebody is not being understood, you can indicate that the contents of the language package are not being received with something like, I don’t get what you mean. It is also possible that the receiver is being fooled and that which is being transmitted has no real, practical meaning. They are just empty words. Or, the opposite could happen and more meaning than appears to be can be packaged in loaded words.

As noted in Reddy’s framework above, the conduit is also a way in which to convey feelings. This allows for words to be filled with emotion or for a remark like, his speech was so powerful. Words can be hateful or the opposite could occur and they could be loving or even lustful.
Of course, this conceptualization is not limited to the spoken word. When assigning an essay to read, a teacher might ask the students to pull out the main ideas. Just being able to discuss ideas being found in writing shows the metaphorical packaging and unpacking that occurs.

Indeed, the very fact that writing systems have developed is evidence of the conduit metaphor. If a spectrogram of speech were analyzed, one would see a largely unbroken stream with one phoneme flowing effortlessly into the next. Yet, from this mish-mash of sound, people have developed writing systems to divide it up into individual segments, then words and sentences, each with their own little package of meaning.

This is not to say that there is no psychological reality to phonological systems. Indeed, this can explain why writing systems in general have been able to be applied to every recorded language. However, the way in which this system is understood is largely metaphorical. That is, the target domain of a phonological system is understood in terms of constructed writing systems. This can be shown by the variety of writing systems around the world. Some systems, like the Roman, Greek, Cyrillic, and Korean Hangul alphabets have individual characters that represent sounds (or a variety of sounds). Japanese hiragana and katakana, however, are syllabic in nature. It is through these different conceptualizations that people understand the sound systems of their languages.

**LANGUAGE IS AN OBJECT.** As we saw in chapter 1, it is common for abstract entities to be given ontological status and language is certainly no exception to this. For example, if you live in a foreign country for long enough, you might pick up the language, as if you were to pick up a souvenir. Many linguists will refer to the process by which one learns to speak as language acquisition, as if one were acquiring land or an art collection.

The language object also has certain comparable properties. For example, one can say that they speak the same language to indicate the indistinguishability of two people's
communicative system. Or, the language objects might have a lot of features in common, but not be identical. This allows for statements like *Spanish is similar to Portuguese.*

There are also boundaries for the language object. For example, *Weltschmerz is in German,* but it is not *in Swahili.* The use of the preposition *in* in statements like these indicates a further metaphoric understanding that *LANGUAGE IS A CONTAINER of sorts.*

The basis of much of formal linguistics also seems to be oriented towards language being an object, specifically, an object with a myriad of parts. This could be expressed as *LANGUAGE IS A MODULAR OBJECT.* There is a progressive schema from the smallest to the largest units of language, all of which are interchangeable at their own levels to a certain degree. At the bottom, sounds are placed together and are left to interact, as seen in phonetics and phonology. These sounds collectively form a series of stems and affixes to form words, as seen in morphology. The words are then placed in an order governed by a series of rules and processes, as is seen in syntax. Chomskyan syntax envisions these word objects as dangling from a mobile-like tree where the word objects might be free to move or, conversely, are blocked from movement. Finally, these sentence objects are placed in certain orders and patterns, as is discussed by discourse theory or genre analysis.

Overall, formal linguistics is a microcosm of a series of building blocks, growing progressively larger and more complex at each stage. As stated earlier, each building block has the possibility of being interchanged with something similar, albeit with certain restrictions. For example, in a sentence like $s[NP,NOM[He],VP[saw,NP,ACC[the,birds]]]$, all of the components (NP-NOM, VP, NP-ACC, etc.) are interchangeable to a certain degree. You could replace *[He]* with *[the woman], [Bob], [the grumpy munchkin],* or any other expression denoting an entity which has the ability to see (for this particular verb, at least). This idea of interchangeability goes from the lowest levels of phonetic descriptions to layers of pragmatic discourse. Of course, each such alternation does have consequences in the end meaning
of the construction and it is the analysis of such changes that forms the basis of much of linguistic inquiry.

Even non-linguists recognize the multi-component nature of language. In school, people learn about letters, words, subjects and predicates, sentences, paragraphs, etc. These are seen as distinct items and discussed as such. One learns everything from the sound of letters, the spelling of words, the multi-paragraph essay, etc.

This all leads to ‘the conception of a language as a distinct, discretely bounded, clearly delimited entity that is basically stable and uniform within a community of speakers’ (Langacker 2008:216), despite the fact that many of these propositions are not true when examined objectively. According to Langacker, there is really no such thing as a language per se as our entire understanding of it exists entirely metaphorically. He notes that you will never find 100% overlap in the linguistic systems of any two people on earth as each will have their own idiolects. How much of an overlap in idiolects constitutes a language? There is no concise answer for that. McWhorter (2001) notes a similar problem when trying to find the line between a dialect and a language. Despite people readily thinking that such a division is there, the line is fuzzy at best. Language, a nebulous entity, is understood as if it were completely discrete.

LANGUAGE IS A MACHINE. Language being like a machine is absent from any discussions of metaphor that I have seen. Nevertheless, this type of understanding is common in both everyday and professional discussions of language. For example, people can say that that’s not how language works. Or, if somebody has not spoken German in some time, they could express that with my German is rusty. Language is a machine that begins to oxidize if left unused too long.

Likewise, linguists talk about the function of certain aspects of language. /d/ works as a past tense marker in English. There is a pragmatic function of using modals instead of
imperatives (e.g. *Could you please pass the salt* versus *Give me the salt*). As with any machine, it is expected to do some sort of work.

Much of formal linguistics also uses mechanical words to describe language. Indeed, one encounters phrases like *the mechanics of language* often enough in the discipline. As discussed above, language is composed of a multitude of parts. Furthermore, these parts *interact* as if gears on a machine. For example, in phonology, phonemes are conceptualized as having a large number of features and these features can produce changes if they match correctly. A language like Swahili has a process of homorganic nasal assimilation for certain plural markers. For instance, a feature of [+labial] on the initial consonant of a root will *interact* with the features of the nasal plural marker to be [+labial] as well. It is as if the cog spins and when the sprockets are in sync with the adjoining gear, then a change will occur.

Collectively, things like these are called the *rules* of language. While *rules* does not have a mechanical meaning in and of itself, it can be seen to have such a meaning in this metaphor. Specifically, the language machine is envisioned as being complex with a large number of components and the way that these components interact is via *rules*. Phonemes, morphemes, constructions, etc. are like the gears that spin and *rules* define how those gears interact to put the language machine into motion. (This appears to be a type of metaphor that underlies conceptualization even though there are not many examples in everyday language (Kövecses 2005). In other words, being able to think of *language* in terms of gears interacting does not necessarily entail common linguistic examples).

This is not to say that there are no rules to language. Obviously, it is an ordered system that can be analyzed and predicted. However, the individual theories that seek to conceptualize language are all metaphorically based. The target domain, *language*, is presented in terms of some sort of visual abstraction. Consider Figure 3 (taken from Langacker 2008:210). Both diagrams show a representation of *Alice admires Bill*. A very
simplified Chomsky-style perspective is shown in (a) and a cognitive grammar analysis is shown in (b). It is a single linguistic token that has different analyses, as is represented by different visual abstractions. That is, the sentence *Alice admires Bill* is understood in terms of these diagrams.

**LANGUAGE IS A TOOL.** This conception shows up quite literally in basic statements like, *Language is a tool for communication.* As with any tool, it is intended to serve some sort of purpose. This particular tool is multifaceted as one can *use language* for a variety of tasks. The act of talking can do things as varied as ordering a cheeseburger to wooing a mate.

Furthermore, the language tool is something that can be quite powerful. In fact, one's words or speech can be called *powerful*. Language can be used to *incite violence* or conversely, to *quell the masses*. One could even say that the tool is really a weapon. The adage *the pen is mightier than the sword* relies upon the weapon nature of the language tool. In a fight, words can be *tossed around, bandied about* or even *hurled* to hurt the other person. Just the fact that *verbal abuse* is in legal books shows not only the weapon-like nature of words, but also the seriousness with which society regards the misusage of it.
As with any tool, there is a learning curve. For example, suppose somebody is learning German and they want to use it in order to improve fluency. You could easily say that that person is practicing their German, much in the same way that they would practice playing guitar. A hot topic in second language pedagogy for more than 30 years is communicative competence. Is the person able to use their new language tool in an effective manner? If so, they will find this ability to be quite useful.

LANGUAGE IS A BIOLOGICAL ENTITY. Language is discussed as if it were a biological organism. For example, languages have a life force. French is a living language, but alas, Latin is a dead language. Many language scholars are concerned that Native American languages are endangered. They are not just dying one by one, but an entire class of them is headed for the grim reaper. They will become extinct if nothing is done.

Languages also have a pedigree. They can be related or unrelated. Furthermore, there are degrees of relations. For instance, English is closely related to German. It is also related to Greek, but not as closely. In other words, English and Greek are in the same family of Indo-European, but English and German are in the same sub-family of Teutonic. They are not related to the Bantu languages, however, as this is a different family of languages.

This use of biological terminology appeared in one of the first landmark books in American linguistics, William Dwight Whitney’s The Life and Growth of Language: An Outline of Linguistic Science in 1883. More recently, McWhorter (2003) discussed language change over the millennia using the theme of a natural history of language. So, we can discuss language history as the evolution of language. Conversely, there is some tight-laced, prescriptivist, high school English teacher out there seriously concerned about the degradation or the devolution of language. If the proper usage of language is not guarded, then surely it will decay!
We can also make a distinction between natural and artificial languages just as we might make a distinction between a natural and artificial heart. For example, Estonian is a natural language as it arose by organic processes. Esperanto, however, is an artificial language as it was invented by a single man.

In formal linguistics, there is also a degree of biological understanding, but on an internal level. For example, things as varied as syllable structure to sentence level syntax use trees, a natural plant, as inspiration for representations of their structure. (However, it could be argued that the use of tree was inspired by the shape of the representation, not the other way around.)

LANGUAGE AS A SOURCE DOMAIN. Until now, all discussion of language has been about its conceptualization as a target domain. In the usual formulation of metaphor theory, the abstract target domain is understood in the more bodily motivated, tangible source domain. So, it does come as a bit of a surprise that something as nebulous as language could function as the grounded role in this function. This could be because of the already physical understanding of language as described above or it could be because, despite its fuzzy nature, language is something that is firmly grounded in our bodily experience.

Nevertheless, language does have a place as a source domain. It might be used to indicate that something can be communicated by means other than words. You will often hear music teachers exclaiming that music is a language. Not to be outdone, math teachers will also proudly declare that math is a universal language. The intent here is to show that their respective mediums can be used to convey something, much in the same way as the conduit metaphor discussed earlier. For music, emotions and meaning are tucked into little sonic packages and sent to the listener where they are subsequently unpacked. Likewise, poets for millennia have been extolling the virtues of the language of love. Once again, the indication is that meaning being sent from one person to be ‘unpackaged’ by another and understood in a similar manner to language.
Language can also be used as a source domain to indicate the unintelligibility or complexity of something. This is the basis for the exclamation it’s all Greek to me, used to express that something it utterly incomprehensible. Or, it could be something found being used by speakers of one’s own language community. For countless years, the elder generation has complained of the slang that teenagers use with It’s like they’re speaking their own language! Lately in the popular press, there have been many discussions about how texting has become a language unto itself. Of course, this is not really the case as the teenagers and texters are still using English (or whatever their local tongue is), albeit with a series of new lexical items and abbreviations and other terms unfamiliar to the uninitiated.

In conclusion, we have seen that our conception of language is largely metaphorical. It is envisioned, by linguists and non-linguists alike, as a largely physical entity comprised of a large number of parts. Furthermore, these parts interact functionally as if a machine. There is also an understanding of language as a living, breathing, biological organism subject to the same relations and fate as any of us. Additionally, language can be used as a source domain to indicate either the communicative or incomprehensible properties of something.
CHAPTER 5

INTO THE METAPHORIC FUTURE

Thus far, we have seen how metaphor theory works by using mind, time, and language as examples. It has been shown that our understanding of these complex, intangible phenomena is largely metaphorical. That is, they are understood in terms of something else. However, the complete assertion addressed in the first chapter is that the ‘something else’, the source domain, is grounded in bodily experience. As the analysis proceeded, it became apparent that this is not always the case, as many times the source domain is yet another metaphorical understanding. For example, THE CONDUIT METAPHOR uses THE MIND IS A CONTAINER as one of its principal components.

Nevertheless, it could be argued that THE MIND IS A CONTAINER could itself be reduced to elements of physical experience. After all, virtually all humans have held some sort of container in their hands. They have literally felt the relation of the sides to form some sort of vessel, complete with corresponding area to access the contents. So, it is entirely possible that even though one metaphorical conceptualization might rely upon another metaphorical conceptualization, it can eventually be reduced to experiences grounded in bodily experience.

The largest problem with something like that is how ill-defined ‘bodily experience’ itself is. What are the base elements? Does it simply reduce to the five senses? If so, which aspects? What is needed here is some sort of metaphorical primitives, similar to the semantic primitives outlined by Wierzbicka (1996). Wierzbicka was not interested in metaphor theory, but it is her contention that the meaning of anything within a language can be reduced to fundamental, simple, indefinable, and universal elements. These elements (i.e. primitives) would be combined to notate the meaning of any given word.
These semantic primitives would include things like (Goddard 2008:33):

- substantives: I, YOU, SOMEONE, PEOPLE, SOMETHING/THING, BODY
- relational substantives: KIND, PART
- determiners: THIS, THE SAME, OTHER/ELSE
- quantifiers: ONE, TWO, MUCH/MANY, SOME, ALL
- evaluators: GOOD, BAD
- descriptors: BIG, SMALL
- mental predicates: THINK, KNOW, WANT, FEEL, SEE, HEAR
- speech: SAY, WORDS, TRUE
- actions, events, movement, contact: DO, HAPPEN, MOVE, TOUCH
- location, existence, possession, specification: BE (SOMEWHERE), THERE IS, HAVE, BE (SOMEONE/SOMETHING)
- life and death: LIVE, DIE
- time: WHEN/TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME, MOMENT
- space: WHERE/PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE
- logical concepts: NOT, MAYBE, CAN, BECAUSE, IF
- intensifier, augmentor: VERY, MORE
- similarity: LIKE/WAY

If the contention of Johnson (1987) that all metaphorical understanding can be reduced to things firmly grounded in bodily experience is correct, then a similar type of list could be developed. For example, Lakoff and Johnson (1980/2003) have already acknowledged that there is an ontological component to many conceptual domains. As we saw in the earlier analyses here, the same sort of source domains were repeated. For example, mind, time, and language all have conceptualizations as a physical object or as a container. If these sorts of things are commonplace, then perhaps they could serve as base elements for other cognitive domains as well.

To be fair, there has been some work done along these lines by Grady (1997). He makes a distinction between primary and complex metaphors. Primary metaphors come directly from an embodied experience, whereas complex metaphors are constructed by using several primary metaphors in concert with each other. Grady does give examples of
primary metaphors, which consist of its subjective judgment, its sensorimotor domain, and
its primary experience. He provides a number of examples. Here are four such primaries
(from Lakoff & Johnson 1999:50):

**AFFECTION IS WARMTH**
subjective judgment: affection
sensorimeter domain: temperature
example: ‘They greeted me warmly.’
primary experience: feeling warm while being held affectionately

**IMPORTANT IS BIG**
subjective judgment: importance
sensorimeter domain: size
example: ‘Tomorrow is a big day.’
primary experience: as a child, finding that big things, e.g. parents, are important
and can exert major forces on you and dominate your visual experience.

**HAPPY IS UP**
subjective judgment: happiness
sensorimeter domain: body orientation
example: I’m feeling up today!
primary experience: Feeling happy and energetic and having an upright posture
(correlation between affective state and posture)

**SIMILARITY IS CLOSENESS**
subjective judgment: similarity
sensorimeter domain: proximity in space
example: ‘There colors are quite the same, but they’re close.’
primary experience: observing similar objects clustered together (flowers, rocks,
trees, buildings, dishes)

While Grady does provide many such examples, it is far from an exhaustive list. So, more
work could be done along these lines. (Grady et al (1999) addresses how these primary
metaphors become complex metaphors by using the framework of blended spaces
mentioned in chapter 1.)

It has been claimed that metaphor is a universal feature in the world’s languages
assertion that primary metaphors are grounded in bodily experience is correct, then one
would reasonably expect for the same metaphors to appear in a variety of the worlds
languages. Kövecses (2005) devoted an entire book to this theme and notes that there is a
certain degree of truth to this for primary metaphors, but complex metaphors are highly cultural and, therefore, less likely to be found in a variety of languages.

In one example, Kövecses (2005) observes that in English, there are a number of metaphorical understandings of happiness. Specifically, HAPPINESS IS UP (e.g. I'm feeling up today), HAPPINESS IS LIGHT (e.g. When she heard the news, she lit up), and HAPPINESS IS A FLUID IN A CONTAINER (e.g. I brimmed over with joy when I saw her). These exact same source domains show up in Chinese and Hungarian as well as English. Considering these are three unrelated, typologically distinct languages, there are only three possibilities for this trend: (1) it happened coincidentally, (2) one language borrowed these metaphors from another, and (3) there is some sort of universal motivation. While Kövecses acknowledges that the first two possibilities cannot be ignored completely, but he still opts for the third based on evidence from other conceptualizations.

For example, Kövecses (2002) looked at linguistically expressed, metaphoric constructions of anger in six varied languages (English, Hungarian, Chinese, Japanese, Polish, and Zulu) and found that some are represented in each language. Specifically, ANGER IS HEAT and ANGER IS AN OPPONENT IN A STRUGGLE are found in all six languages. The reason for these common source domains, Kövecses claims, can be explained through the commonality of bodily experience. That is, there is a measurable, physiological response to the feeling of anger. One’s blood pressure begins to rise and blood rushes to the skin, effectively raising the temperature of the person feeling anger. This would account for the seeming universality of ANGER IS HEAT. Furthermore, there also appears to be a universal

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1 This is reminiscent of people seeing the glass as being half full or half empty. The former are optimists, the latter pessimists. Perhaps the real metaphor is MOOD IS A FLUID IN A CONTAINER. If this fluid is high in the container or even overflowing, one is happy; if there is only a small amount of fluid, one is unhappy. This also relates to the UP IS FAVORABLE and DOWN IS UNFAVORABLE orientational metaphors discussed in chapter 1.
element to keeping one’s anger under control as the failure to do so could result in bodily harm or even death.

However, Kövecses’s data also showed a few anger metaphors that only occurred in a single language. CAUSING ANGER IS TRESPASSING (e.g. You’re beginning to get to me) was only found in English and ANGER IS A BURDEN (e.g. I feel light after having expressed my anger) is only found in Japanese. These show that there is a highly cultural element to metaphor where the collective mores and values of a society are embodied in the language. Furthermore, this cultural encoding is likely to be common in the more complex structural metaphors. For example, one would not expect a remote New Guinean villager to have THE MIND IS A COMPUTER, simply because there are no computers as part of their experience.

So, there does appear to be a relationship between what Kövecses has found and the primary metaphors described by Grady (1997). Specifically, those metaphoric understandings directly grounded to the human bodily experience are more likely to appear in a variety of languages.

What is needed is a systematic, cross-linguistic analysis of Grady’s primary metaphors to see exactly how wide-spread these are. I would propose that those that are represented by the world’s languages could act as primitives/primaries, but those that are not should be removed from that list. Of course, the definition of ‘represented’ in this case would remain to be seen. Should the qualification be that the primitives are represented in all languages, similar to what Wierzbicka (1996) proposes? Or would it be more analogous to phonetic features (i.e. a finite list from which languages ‘choose’)? This could only be answered once a sufficient set of data was accumulated.

There also needs to be an exploration of how new metaphors are formed and why expected ones are missing. An example of a relatively new metaphor would be any cognitive domain that uses a computer. These devices are quite new and complex and people need a way to understand them. As we saw in chapter 2, equating the mind to a
computer is quite common. So, what is it about these cognitive domains that allows them to be so easily connected? Furthermore, how did this understanding become part of everyday language?

Conversely, there is no explanation for why expected metaphors do not appear. As we saw in chapter 2, you can express your approval or disapproval of an idea with *that sounds good* and *that sounds bad*, respectively. However, this binary set does not occur for the sense of smell. While one can say *this stinks* to show disapproval, one cannot say *that smells great* to show approval. Why is this not represented? An explanation for this is needed.

Overall, the situation seems to be that all the world’s languages use metaphor, though the particular conceptualizations of complex metaphors used as a source domain are likely to vary as cultures are likely to vary. Kövecses (2005) notes that the context of one’s body and cognitive preferences and styles that are instilled via enculturation will also have an effect on the metaphorical conceptualizations that one will use. However, he also notes that universal embodiment has the potential to lead to universal metaphors, as in the ANGER IS HEAT metaphor discussed above. In other words, some metaphoric conceptualizations come from purely physical experiences (like the increase in blood pressure from anger) and others come from experiences that are just as much cultural as physical (such as early childhood experiences in a family). So, it would appear that our mental worlds are not simply created by physical experiences, but by one’s individual experiences in a cultural, physical world.

If the Lakoff and Johnson (1980/2003) assertion that metaphor is not simply a linguistic phenomenon, but rather a cognitive one, then one would expect some sort of empirical evidence to support this. Several cognitive psychologists have devised experimental ways of testing the reality of metaphors in the mind, usually with results that back this claim (Gibbs 2006).
One of the earliest such experiments (Gibbs 1992) looked at how native speakers of American English conceptualized their embodied experience with pressurized containers. They were asked what would cause the container to explode, if the container explodes on its own volition, if the explosion happens in a violent or gentle manner, etc. The intent here is for people to give a physical profile of their personal experiences with a pressurized container.

The answers given were remarkably similar. The subjects described a situation where a pressurized container will explode unintentionally in a violent manner when fluid in the container is heated. Gibbs then noted that this embodied experience might serve as a source domain for the ANGER IS A HOT FLUID IN A CONTAINER metaphor, which gives rise to such expressions as blow your stack, flip your lid, hit the ceiling, etc.

This might not appear to be the most profound experiment, but it does show that there is a shared psychological reality to people’s conceptualizations about this source domain, which subsequently shows up in common metaphorical linguistic tokens. However, it does not address how this physical understanding connects to the linguistic realizations. Gibbs (2006) notes that a similar follow-up study done in English and Portuguese shows that embodied experience of hunger could act as a source domain for other common metaphorical linguistic constructions (I’m starved for affection, He’s hungry for power, etc.)

Boroditsky and Ramscar (2002), in pursuit of people’s conceptual notions of time and motion, conducted the only train-based experiment I have ever heard of. Specifically, they were inquiring about an ambiguous situation where a scheduled meeting to be held next Wednesday is rescheduled and moved forward two days. The subjects were physically riding on a train when told this, then asked what day the meeting will be held on. Furthermore, each subject was asked the question once, but at various times during the ride.
If the person conceptualized **TIME PASSING IS A MOVING OBSERVER**, then they will answer that the meeting is on Friday (i.e. the person is the observer and is moving forward into the future. For example, *We’re coming up on Thanksgiving*). So, the meeting is seen as moving into the future along with the observer. However, if the subject answers that the meeting is on Monday, then they are using the **TIME PASSING IS A MOVING OBJECT** conceptualization (i.e. the observer is stationary in the present and the time object is moving forward towards them. For example, *Thanksgiving is rapidly approaching*). That is, the meeting time is conceptualized as moving towards the observer stationed in the present.

Boroditsky and Ramscar (2002) note that more people said the meeting was on Friday. They also note that this answer was much more likely at the beginning and end times of the train ride. They conclude that this is because people are most aware of their journey during the beginning and end of their trips and, therefore, are much more likely to use the **MOVING OBSERVER** conceptualization.

Again, this does not seem to be a very profound experiment, but it does indicate that it is possible that people are using their bodily experience *at that moment* to influence their conceptualizations. However, without a non-train-riding control group, this cannot even be said with certainty.

In cross-linguistic experiments, it has been concluded that the conceptualizations in one’s native language do have a measurable effect. For example, Boroditsky (2001) looked at how native English speakers and native Mandarin speakers answer questions about time relations. She notes that while English only conceptualizes time in a horizontal manner, Mandarin has both a vertical and horizontal framework. For example, Boroditsky (2001) notes that one can refer to ‘*the previous month*’ and ‘*the following month*’ in both English and Mandarin. However, Mandarin can also refer to *climbing to last month* and *descending to next month*, whereas English has no analogous conceptualization.
When the subjects were asked to answer questions about time relations paired with a visual representation of data either vertically or horizontally, the Mandarin speakers were able to process the vertically presented data more quickly than their American counterparts. She concludes that this is due to the speakers’ internalized conceptualizations formed by their language. In other words, having a vertically represented timeline in one’s source domain will enable one to process vertically presented time relationships faster.

So, we have a handful or researchers having done a small amount of empirical studies. This is perhaps the most impoverished area of modern metaphor theory. As stated in chapter 1, cognitive linguistics purports to be based on how the mind actually processes information. Therefore, it is the duty of these researchers to back their claims with quantifiable, repeatable, empirical studies if metaphor theory is ever to be taken seriously. Simply relying on the intuitions of scholars will not be sufficient here.

This same sentiment was expressed in chapter 3 after doing a corpus-based analysis of *time*. I concluded that while most of the intuitions about its metaphoric conceptualization were represented by the data, others were either absent or over-represented. This indicates that using corpora to analyze metaphor might provide an empirical basis upon which conceptualizations can be constructed. While this method will provide data, it does not explain everything.

In particular, the cognitive mechanisms which lead from embodied experience to linguistic metaphors also needs to be explored. The mental spaces (Fauconnier 1994) and blended spaces (Fauconnier & Turner 2002) introduced in the first chapter are certainly intricate and seem to explain a lot of these processes. However, it is not clear whether these formulations have any sort of empirically verifiable psychological reality. If this cannot be shown, then perhaps another explanation of how the source domain connects to the target domain is needed.
Also absent from the literature is a neurological explanation of metaphor. Kövecses (2005) does suggest a possible way in which the brain connects the body with metaphoric understandings. Using the example \textit{AFFECTION IS WARMTH}, he hypothesizes that it is possible that when a baby or child is being held and hugged, there is activation of the neurons for both the warmth that is felt and the affection that is experienced. These two sets of neurons firing together at the same time will inevitably connect them, thus linking affection and warmth. While this scenario does make sense on a logical level, it is quite meaningless without actual data to back it up. If, for example, an MRI showed activation of areas in the brain associated with both bodily temperature and emotion while reading these types of metaphor, it would lend credence to this conclusion.

In the end, the debate will certainly continue as to whether one of the most fundamental tenets of metaphor theory, namely that it is the basis for cognition, has any basis in reality. Nevertheless, it cannot be denied that metaphor is nearly ubiquitous in all the world’s languages. As such, it does warrant attention from those who study language. Study of metaphor has already found a place in the discussion of politics (Lakoff 1996) and psychotherapy (McMullen & Conway 1996). Others have suggested that an understanding of metaphor has a place in the language classroom for both native speakers (Cameron 2003) and those learning a new language (Kövecses 2005, Langacker 2001). Other areas that have potential for application are theology, philosophy and history of science, communication, child development, or any other area that is involved in the understanding of complex, non-tangible phenomena. However, none of these will gain acceptance from a wider audience without a more robust collection of empirical studies. It is my opinion that those who want to continue with metaphor theory should concentrate on this area.
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