The Embodied and Discourse Views of Metaphor: Why These Are Not So Different and How Can They Be Brought Closer Together

Raymond W. Gibbs, Jr.

University of California, Santa Cruz

Department of Psychology

Santa Cruz, CA 95064

USA

gibbs@ucsc.edu

Abstract

Metaphor scholars have long debated whether the possibility that metaphor is "conceptual" or possibly "embodied" ignores crucial social and linguistic facts about metaphor in discourse. Scholars adopting either of the "embodied" and "discourse" views of metaphor typically advance different theories on the origins, motivations, functions, and uses of metaphors in language and thought. These different theoretical perspectives are also generally studied by scholars from different academic disciplines which employ very different empirical methods (e.g., discourse analyses vs. experimental techniques). My aim in this chapter is to show how these different perspectives are closely related given (a) the embodied nature of metaphoric discourse, and (b) the social context for all embodied action. Rather than arguing for the superiority of one approach over the other, my plea is for a better integration of these views to capture the complex realities of metaphoric experience.

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1. Introduction

Metaphors are butterflies. I have long thought about metaphors in this particular metaphorical manner, which has afforded me various insights into how metaphors work and the different ways they can be studied. For example, some butterflies aficionados, called lepidopterists, closely examine individual dead butterflies while they are neatly arranged, and pinned down, under glass. Peering down at the butterflies may perhaps tell one about aspects of their biology, their exquisite color patterns, and differences between types of butterflies. I have no doubt that much can be learned from staring at butterflies in this way. Still, butterflies are beautiful living creatures, fluttering about in nature, interacting with plants, animals, people, and, of course, other butterflies. My personal preference is to see butterflies in the wild, even if this is makes them more difficult to study compared to dead specimens in a laboratory. There may be huge benefits to this research as it allows one to explore how butterflies evolve and function in rich ecological contexts.

Metaphors are also living creatures, like butterflies, and they are most beautiful when seen in the context of persons interacting in the world, whether metaphors spill from our lips, pens, or fingers/hands/arms, as in the case of metaphorical gestures. Similar to the study of butterflies, metaphor enthusiasts have choices over how best to explore what metaphors are and how they function in nature. We can, of course, still examine metaphors “under glass,” as when placed individually down on paper, to better understand their structure and possible meanings. However, we should never ignore the fundamental fact that metaphors are human actions. Divorcing metaphors from how people create metaphors, the bodies they have, the ways they use

metaphor to coordinate with other persons, provides us with only a small glimmer of the roles that metaphors have in human life.

This preamble sets the stage for the discussion in this chapter on the choices scholars make when they adopt particular research strategies when studying metaphor. My primary argument will be that the philosophical and methodological approaches we embrace in studying metaphor have enormous implications for our respective theories of metaphor. I am especially concerned with the unfortunate tendency in metaphor scholarship to focus only on certain aspects of metaphor, and to adopt only certain methodological ways of doing so. These habits are prevalent in many academic disciplines, perhaps quite naturally. Yet looking at metaphors from singular points of view sometimes leads to inaccurate, misleading theories of metaphorical thought and language.

2. Levels of Analysis

How do we explain the processes and products of metaphor performance? I purposely talk about "metaphor performance" rather than "metaphor use" because "performance" gives proper attention to the fact that metaphors are enacted and not simply selected for use from a mental metaphor thesaurus. But trying to explain metaphor performance is tricky business precisely because we can do so using a variety of difference approaches. Consider some of the ways or perspectives in which scholars have studied metaphor performance.

evolutionary

historical

socio-cultural

discourse

linguistics

cognitive

psychological

embodied

neural

In each case, different scholars have claimed that metaphor can be most fruitfully examined almost exclusively in terms of specific levels of analysis. Metaphor may be characterized as emerging from evolutionary, or socio-cultural, or cognitive or neural activities, to name just a few of the relevant forces that possibly influence metaphorical structure and meanings. But once again, there is often the explicit or implicit claim that one's own preferred level of analysis argues against the relevance of other perspectives on metaphor performance. For example, with the emergence of conceptual metaphor theory (CMT) in metaphor studies (Kovecses, 2010; Lakoff & Johnson, 1980, 1999), various scholars have responded by suggesting that CMT ignores other important levels of analysis (e.g., cultural, linguistic) that may better describe the nature of metaphorical actions (Haser, 2005; Quinn, 1992; Rakova, 2003). More recently, various metaphor scholars have explicitly suggested that neural and embodied levels of analysis are far less relevant than are socio-cultural and discourse perspectives on metaphor (Zinken, 2007). I am most interested in how these debates often limit our understanding of what metaphor is all about.

3. **Different Methods**

Accompanying arguments for the importance of certain levels of analysis in accounting for metaphorical thought and language is the embrace of particular research methods as being

best suited for explaining metaphor performance. Consider some methods by which metaphors have been studied.

Ethnographic studies

Literary analyses of individual works or genres

Philosophical (conceptual) analyses

Linguistic analyses (intuitionist, corpus)

Psychological analyses (experimental)

Neuroscience (case studies, brain imaging)

Metaphor scholars will typically employ research methods appropriate to their own disciplinary backgrounds, such that anthropologists will use ethnographic methods, linguists will use different linguistic methods, psychologists will adopt experimental techniques, and neuroscientists will stick with case studies and experimental measures of brain activity.

However, the relations between levels of analysis and research methods do not always neatly match one another. Linguists, for example, will use various intuitionist and corpus methods to discern important facts about metaphor performance regarding levels of analysis ranging from the evolution of language to cultural perspectives on metaphor down to possible neural underpinnings of metaphorical thought and language. Discourse analysts, who often embrace different linguistic methods, often aim to describe something about forces motivating metaphor from the evolution of language down to cognitive and embodied levels of analysis. Psychologists sometimes use experimental methods to uncover insights about cultural factors down to embodied perspectives on metaphor.

Still, the important fact remains that scholars will often adopt specific research methods and create theories of metaphor performance which, in their minds, best explain the empirical

findings when using their preferred methods. Scholars who adopt particular methods sometimes ignore, and write dismissively about, other empirical methods (e.g., psychologists who embrace experimental measures often do so explicitly because of a great distrust of intuitionist linguistic analyses of metaphor- McGlone, 2007).

In general, part of the background in contemporary debates concerns which levels of analysis and which empirical methods are best capable of explaining the nature and functions of metaphor in thought and language. Metaphor, in all its guises, is clearly a complex phenomenon and it is not surprising that so many scholars approach their studies in so many different ways. But let me now briefly review four concrete examples of metaphor in action to illustrate some of the debates over what may be the preferred level of analysis and empirical methods for studying and explaining metaphor performance.

4. Four Example of Metaphor Performance

Kovecses (2015) has offered an explanation of where metaphors come from by considering a number of real-world linguistic examples. For instance, he observed the following metaphorical utterance in a news article about the famous, now elderly, rock n' roll musician Fats Domino, who lives in New Orleans, Louisiana. Back in 2005, Domino lived through the very destructive Hurricane Katrina in that part of the world. The article made the following observation about Domino:

> "The 2005 hurricane **capsized** Domino's life, though he's loath to confess any inconvenience or misery outside of missing his social circle…"

The use of "capsized" to refer to Domino's life, and not to a boat tipping over in water, is clearly metaphorical in context. Kovecses' main point was that this boating term was employed

in a metaphorical way precisely because Hurricane Katrina gives rise to images of vast bodies of water and tremendous flooding in which many buildings, animals, and people did not survive. Thus, a term referring to a temporary overturning of a boat was conceptually salient given the context of talking about the impact that Katrina had on many people's lives, including Domino's. It simply makes sense, and is contextually apt, then, to metaphorically speak of a temporary upheaval in life as being "capsized."

What level of analysis best explains this small bit of metaphorical creativity? What empirical research method is most appropriate for explaining how this particular metaphor performance arose and is understood by others? I wish to focus on two different possibilities, even though there are surely many others. One debate is whether metaphor is best explained as a purely discourse as opposed to a cognitive and embodied phenomenon.

Under a classic CMT perspective, the use of "capsized" in the above context is motivated by a primary metaphor (Grady, 1997), namely that PERSISTENCE IS REMAINING ERECT. Under this view, the metaphorical use of "capsized" emerges from an enduring correlation in bodily experience. Thus, the existence of things in the world that persist is correlated to a significant, positive degree with things that are capable of remaining upright. For instance, people, animals and plants exist in a generally upright form when alive, but lose that upright stance when ill or dead. Similarly, buildings and other man-made objects typically remain upright when they are still in working order, yet will fall apart, over time, when no longer in use. These correlations are understood in deeply embodied ways, given our viewing of upright objects that are alive or persisting, and because we feel ourselves, our bodies, as being more capable of being upright when we are healthy than when ill. Once again, these correlations in our experiences are not perfect, yet they are strong enough in a positive direction to help serve as the concrete foundation

in structuring certain abstract concepts, including those referring to different facets of our lives (e.g., our careers, marriages). Different linguistic expressions provide evidence for the reality of the PERSISTENCE IS REMAINING ERECT primary metaphor, such as "The relationship fell apart," and "I can no longer stand working with my boss."

As is well-known within CMT, primary metaphors can motivate the existence of different conceptual metaphors such as THEORIES ARE BUILDINGS, which is why it makes sense to talk of "The theory collapsed under the weight of the new evidence." Furthermore, the PERSISTENCE IS REMAINING ERECT primary metaphor interacts with another primary metaphor, PURPOSES ARE DESTINATIONS, to create the enduring conceptual metaphor LIFE IS A JOURNEY. When speaking of Domino's life being negatively affected by Hurricane Katrina, the combination of these two primary metaphors more specifically gives rise to the idea that LIFE IS A SEA JOURNEY. Not surprisingly, sea journeys are often taken in boats, which we all know are unable to proceed toward their destinations when they capsize.

This embodied perspective on metaphor performance suggests one reason why people talk in particular ways, and not others, when referring, for example, to success and failure in one's personal life story. In the context of a discussion about the impact that Hurricane Katrina had on Fats Domino's life in 2005 and beyond, it makes sense to think of his situation as a temporary inability to remain upright, which can be creatively instantiated with the highly salient idea of a boat capsizing. Even if the social and physical context of the "capsized" metaphor makes the use of this term more of an one-shot analogy, the motivation for this creative metaphorical word is still solidly grounded in the embodied primary metaphor.

A very different way of explaining how “capsized” came to be used when describing Domino’s life suggests that the metaphor is best explained in entirely discourse terms. Thus, the specific discourse situation, including talk of the devastation brought on by Hurricane Katrina, provides all the information needed to establish the novel, metaphorical use of “capsized.” The discourse context prompted the one-shot analogy of a life temporally being upset is like a boat capsizing. For this reason, many scholars would maintain that the use of “capsized” when speaking of Domino’s situation is an example of a “discourse metaphor.”

A discourse metaphor is “a relatively stable metaphorical projection that functions as a key framing device within a particular discourse over a certain period of time.”[i] (Zinken, Hellsten, & Nerlich, 2008: 363). Metaphorical language may be best explained in terms of the local interactions between the discourse participants, and not at the level of pre-existing conceptual analogies or metaphors. Indeed, appealing to primary or conceptual metaphors in explaining the creation and meaning of metaphors, such as “capsized” in the Domino case. may only be "post-hoc artefact[s] of sorting utterances on the part of researcher[s]" (Zinken, 2007:461). This slap at researchers who engage in systematic analyses of both conventional and novel metaphorical expressions to infer conceptual metaphors is a direct attack on the relevance of the cognitive and embodied perspectives to explain real-world metaphor performance.

Consider now a different example of metaphor performance that has also been used to advance the relevance of the discourse perspective and downplay the role of conceptual metaphors. Quinn (1992) offered a strong argument in favor of a cultural view of metaphor in an analysis of how Americans talked about their marriages. Consider an excerpt from one of her interviews with a male participant who described how his marriage developed over time (Quinn, 1992: 73):

> "Accepting the differences that were there and that were going to- you know, and that I would have to put up with some of the situations that I didn't like and continue to until we had worked it out. But that **however long and stony a road it was**, we had agreed to **set out on it** and **meet each small situation as it came**."

The "long and stony road" metaphor conveys something about the difficulty and lastingness of marriage. According to CMT, the chain of reasoning underlying the husband's narrative rests on the embodied conceptual metaphor ROMANTIC RELATIONSHIPS ARE JOURNEYS, which is more deeply rooted in the primary metaphor PURPOSES ARE DESTINATIONS.

Under Quinn's view, however, journey metaphors are quite popular to talk about marriage because they are excellent "cultural exemplars of a protracted activity having an ultimate objective, beset with difficulties that require effort to overcome, and that can be undertaken with another person- a cluster of factors that also characterize marriage"(Quinn, 1992: 75). Metaphors that can clarify many of the complexities of abstract concepts, such as marriage, will be most appealing and become widely shared among speakers. In this way, metaphor does not constitute how people grasp their marriages, but is simply a rhetorical device they use when talking about what is essentially a nonmetaphorical concept.

A participant in a different interview described the development of his marriage over time in the following manner (Quinn, 1992: 84):

> "But it could be that the situation when we got married, that it was such that we had lots of room to adjust. Because **we didn't have any idea what we were getting into**. That **gave us a lot of room to adjust**. And by the time we had been through the first year we realized, you know, there would **have to be adjustments made**. And a few years afterwards, when things really got serious we were- you know, when **the marriage was**

strong, it was very strong because **it was made** as we went along- it was sort of **a do-it-yourself project**."

A conceptual metaphor analysis of this excerpt rests on an overlapping entailment of two metaphors- MARRIAGE IS A CONTAINER (e.g., "We didn't have any idea about what we were getting into") and MARRIAGE IS A MANUFACTURED PRODUCT (e.g., a "do-it-yourself project"). Although the speaker starts out using one metaphor to make his point (the container metaphor), he soon switches to another (the manufactured product metaphor) to complete his momentary thoughts about marriage. Both metaphors are grounded in embodiment as related to bodily experiences of containment and physically building something. The idea of a marriage being a building is partly motivated by an enduring primary metaphor- SOCIAL STRUCTURES (in this case social relationships) ARE PHYSICAL STRUCTURES.

Quinn rejects this embodied conceptual metaphor account and maintains that people's beliefs about their marriages emerge strictly from cultural knowledge, which is entirely nonmetaphorical. Her argument focuses on the fact that people appear to not have a single, stable assemblage of ideas about marriage. Instead, people use verbal metaphors in discourse to momentarily illuminate different parts of the completely nonmetaphorical concept for marriage.

The question, again, is whether the discourse or embodied approach to metaphor best explains speakers' uses of verbal metaphors, such as that seen in people talking about their marriages.

Another contrast between the discourse and embodied views of metaphor is revealed in research emerging from the "discourse dynamics approach" to metaphor (Cameron, 2008; Cameron et al., 2009). Embracing this perspective entails that scholars conduct metaphor

analyses by working inductively from the data rather than assuming that particular conceptual metaphors are active when a speaker produces a related linguistic metaphor. Metaphor performance is typically manifested through successive metaphor sources that shift and develop as people negotiate meaning, extend their ideas, or exploit potential opened up by the use of a source term in a particular discourse.

Consider, for example, the following short segment from an extended conversation among members of a focus group discussing terrorism (Cameron et al., 2009: 77). A speaker, Phil., describes his reactions to the events of 9/11:

> "when that Twin -- … Twin Tower er., .. happened, it, … (1.0) **put a flaw in the system**… someone's never done that before."

Although the exact topic of the "put a flaw in the system" is vague, it appears, partly based on earlier discourse, to refer to Phil's idea that society is a mechanical system. Thus, the discourse itself leads one to draw this inference that a larger metaphorical theme underlies Phil's metaphorical words. Cameron et al. (2009) explicitly argued that this metaphorical theme, called a "systematic metaphor," arises from with the discourse and is not, more simply, the retrieval of a previously entrenched metaphor in mind, or conceptual metaphor. One can postulate that Phil's comment reflects the idea of SOCIETY IS A MECHANICAL SYSTEM, yet claim this metaphorical thought only emerged within the discourse context. For this reason, conventional metaphors, such as "flaw in the system," do not have similar meanings in different contexts, but are dynamically re-created depending on the specific histories of the participants at the very points in which their talk unfolds. There is never a neutral position to which the cognitive system retreats after each use of a metaphor source, because each word is spoken in an always changing dynamic context that constrains what words, and metaphors, will come next.

Cameron, more broadly, is dismissive of the cognitive, and embodied, view of metaphor because it is too reductive of the phenomenon under consideration. In one discussion of her discourse dynamics approach to metaphor, she criticizes CMT in the following way (Cameron, in press)

> "My basic objection to this claim of fixedness and invariance is that it leads to an impoverished, asocial view of metaphor that denies important realities of human noticing, reasoning and languaging, and that I find inadequate for describing and explaining what people do with metaphor and thus what metaphor 'is'. Furthermore, the scientific method of reduction(ism) that seems to underpin a cognitive linguistic drive to peel back, abstract away, and purify concepts in order to theorise, can be inappropriate for studying human phenomena; at some point in the peeling back, the flesh is damaged, the object of study changes nature and construct validity disintegrates."

Again, one can ask if a discourse level of analysis is superior to a embodied, conceptual metaphor perspective in explaining the details of verbal metaphorical language.

My final example of the contrast between the discourse and embodied views is seen in work on deliberate metaphor. Consider the following conversational exchange (Gibbs, 2015):

> Mark and Larry were old friends who had not seen each other for several years.
> Mark was telling Larry about his marriage.
> Mark said, "We experienced many problems early on after we got married."
> "My wife and I always seemed to argue about even the littlest thing."
> Larry replied, "This must have been difficult for both of you."
> "Have things improved over time?"
> Mark replied,
> "We really **have come a long way since the wedding**."

Most people readily understand Mark's final reply to express the idea that his marriage has improved over time, thus providing an implicit "yes" to Larry's question. One possibility is that people infer Mark's intended meaning through the recruitment of a relevant conceptual metaphor, in this case ROMANTIC RELATIONSHIPS ARE PHYSICAL JOURNEYS. Under this view, listeners tacitly recognize that "come a long way" in this context reflects metaphorical meaning because of the conceptual metaphor specifying a specific cross-domain mapping between marriages and physical journeys.

Deliberate metaphor theory completely rejects the traditional CMT account (Steen, 2006, 2011). It maintains that only certain linguistic expressions are produced and understood as metaphors, namely those that are "deliberate," which can be identified by their novelty (e.g., "Juliet is the sun") or through various markers or signals of metaphors seen in conversation or texts. For instance, there may be cases in which a conventional expression such as "We really have come a long way since the wedding" can be seen as deliberate, again when a speaker marks this as metaphorical through the use of "so to speak," "like," "metaphorical" or some other relevant marker. This perspective assumes, then, that metaphor is very much a discourse phenomenon, with its meanings and structure being best explained by reference to speakers' communicative purposes and not through the blind recruitment of embodied conceptual metaphors.

Does deliberate metaphor offer a better explanation of verbal metaphor use than does embodied conceptual metaphor theory?

5. Some Misleading Distinctions

Part of the debate over what level of analysis best explains metaphor performance involves scholars' different opinions about the theoretical aim of their research studies. For

example, one characterization of the world of metaphor scholarship maintains that there are three primary ways to conceive of metaphor- metaphor in language, thought, and communication (Steen, 2006, 2011). Some scholars are most interested in discovering the ways metaphor works within language, others study the way that metaphor shapes thought, and still others focus on how metaphor functions as a communicative device. Each of these topics demands its own research methods, which, more generally align with thinking about metaphor as a semiotic (language), psychological (thought), or communicative (social) phenomena.

One possibility is that each part of this tripartite division may constitute an autonomous theoretical explanation of the forms and functions of metaphor (Steen, 2006). Even if it may eventually be possible to combine these perspectives in order to create a comprehensive theory of metaphor via principles such as "converging operations," scholars should continue to engage in "methodological solipsism" (Fodor, 1975). Metaphor scholars should pursue their respective studies at the level of analysis, and use the methodological tools, that they believe are most appropriate for understanding what metaphor is all about. There is no need, however, to seek connections with research findings and theories that employ different methods or address different levels of analysis.

When debates between the embodied and discourse perspectives arise they are often accompanied by related discussions about the goals of metaphor theory. For example, many discourse analysts, in particular, claim that their work is devoted toward understanding metaphor use at the supra-individual rather than the individual level of analysis. Although some advocates of CMT also suggest that their linguistic analysis likely best reflect the supra-individual level (Kovecses, 2010), many embodiment scholars maintain that their findings are directly relevant to individual psychology. Indeed, there is a huge body of experimental research from

psycholinguistics and cognitive neuroscience that is consistent with the claims that many aspects of verbal metaphor use recruit enduring embodied conceptual metaphors (Gibbs, 1994, 2006; Gibbs & Colston, 2012). Simply put, people typically produce and interpret verbal metaphors partly in terms of their pre-existing conceptual metaphorical knowledge and experience.

Metaphor scholars who embrace the discourse perspective typically are dismissive of the cognitive linguistic findings of embodied metaphors because, as was mentioned earlier, these ideas may reflect the bias of individual metaphor scholars attempting to deal with systematicity among linguistic expressions. Yet virtually no scholar who advances the discourse perspective either acknowledges or deals with the other experimental evidence on embodied conceptual metaphors. From my point of view, this failure is astonishing. Even if discourse analysts are cautious about imputing metaphorical themes into people's individual minds within their own work, the existence of behavioral and neuroscience evidence supporting the embodied perspective must be properly considered within any theory of metaphor. To assume that individuals do not engage in embodied metaphorical thinking when using metaphors in discourse is downright misleading about what we really know about both individual and collective behavior.

One response to my severe criticism above is to suggest that what happens in the private minds of individuals in psycholinguistic experiments, for example, should not be extended to characterize what people do in social, discourse situations. Once again, drawing a distinction between metaphor in language, thought, and communication offers a theoretical scaffold for ignoring the relevance of both the linguistic evidence on CMT (i.e., metaphor in language) and that experimental studies from psychology and neuroscience (i.e., metaphor in thought), leaving

the discourse level of analysis alone and untouched by the two other parts of the tripartite distinction.

However, this kind of push back against the embodied perspective on metaphor performance misunderstands a key facet of the experimental research. Many psycholinguistic studies, in fact, clearly demonstrate not simply that individuals think in embodied metaphorical ways on certain occasions when they process verbal metaphors. Instead, the experimental data often show that people's interpretations of what others imply or communicate by their words are both quite metaphorical and shaped by enduring embodied metaphorical knowledge and experience. Thus, much of the psychological and neuroscience research directly addresses the effects of understanding verbal metaphor in discourse as a communicative process. Various research in psychology also reveals how many aspects of private thought, including metaphorical thought, is always employed, either implicitly or explicitly at some future point, for social purposes (Gibbs, 2013). For these reasons, the tripartite distinction between metaphor in language, thought, and communication has little basis in human metaphor reality. Similarly, there is a tight, coupled relationship between what people do individually and their collective intelligence (i.e., supra-individual) such that it makes little sense to maintain a strict divide between these two levels of analysis within metaphor theory.

6. Putting the Embodied and Discourse Views Together

My primary argument, once more, is that metaphor is fundamentally something that humans do and, therefore, a theory of metaphor performance should be consistent with what is known about how human beings work. Contemporary research within cognitive science, and originating in widely held approaches within the physical and biological sciences, suggests that

both simple and complex behavioral phenomena generally involve multiple temporal and spatial scales (Bak, 1997). A scale refers to the set of units typically used to characterize some behavior. For example, the temporal scale of neural activity tends to emphasize the milliseconds to seconds range. On the other hand, the temporal scale of geology tends to emphasize kiloannums-to-gigannums (thousands to billions of years).

Different academic disciplines also embrace different spatial scales. Neuroscience, for instance, works mainly in the nanometer-to-centimeter scale as researchers focus, to a significant extent, on activities in very small areas of the brain. Ecology, to take a different field, considers environments on the meter-to-kilometer scale. Of course, some academic disciplines consider multiple temporal and spatial scales. Physics considers everything from the smallest scales of particle physics to the largest scales of the cosmos.

A prime example of complex, multi-scale cognitive and behavioral phenomenon is human language. Thus, linguistic entities, including phonemes, syllables, words, phrases, texts and discourse, all exist at distinct scales. Each is studied at corresponding temporal and spatial scales (from raw acoustic energy patterns unfolding in the millisecond range up to larger structures encompassing minutes, hours, and even days). Language evolution occurs over timescales of years and centuries. But cognitive science research has demonstrates that these different linguistic phenomena are all interacting, such that the behaviors seen at one level are always influenced by the activities ongoing at other levels (Gibbs & Santa Cruz, 2012; Spivey, 2007).

Metaphor performance of all types, including nonlinguistic ones, are emergent from a constellation of factors, rather than being simply explained by one perspective or research

method. Metaphorical actions are always instances of multiple, interacting causation. No single force drives the way people think and use metaphor. A dynamical perspective offers a major corrective to past debates by highlighting the ways metaphor emerges in the moment from the interaction of many factors via self-organizational processes (Gibbs, 2012).

Consider some of the different forces that simultaneously constrain the production of the metaphorical use of "capsized" in the earlier discussed Fats Domino example. These are arranged from slowest moving time-scales to fastest-moving ones.

- Evolutionary forces to maintain survival and enhance cooperation to enhance individual and group welfare. Primary metaphors (e.g., PERSISTING IS REMAINING ERECT) emerge from both evolutionary and experiential forces.
- Culturally specific ideas about different topics, such as how best to deal with difficult life challenges.
- Historical forces related to the author's past experiences as a writer for the specific forum in which the Fats Domino profile was published.
- Social forces that enable speakers to negotiate specific meaning in particular contexts.
- Linguistic factors related to conventions particular word and grammatical uses including, in this case, employing nautical terms to refer to human experiences.
- Immediately salient contextual information such as the presence of the aftereffects of Hurricane Katrina.
- Immediate communicative motivations to state something that is vivid, memorable, contextually relevant and succinct regarding a rather complex abstract idea related to difficulties in one's life.

- Previously stated words that primed the author's use of certain boating and water terms which were related to earlier talk about the physical damage to building caused by Hurricane Katrina.
- Bodily experiences related to enduring concepts that are relevant for speaking about temporary set-backs in life such as the idea of BEING UNABLE TO PERSIST IS NOT BEING ABLE TO REMAIN ERECT OR UPRIGHT.
- Brain and neural activity including that which emerges as brain systems become coupled during particular interaction between speakers and listeners or writers and readers.

These are some of the forces that lead to the emergence of "capsized" being used in a metaphorical manner a specific discourse context. Each force operates along a different time-scale, with some of these crawling along at very slow speeds, such as evolutionary and cultural forces, while others zip along at very fast speeds, such as immediate linguistic processes and the firing of neurons in human brains. The various time scales are not independent, but are hierarchically organized, and are nested within one another so that different forces affecting language experience are coupled in complex, nonlinear ways.

The writer's "choice" of "capsized" is by no means a conscious decision but emerged given his exact brain, body, and world contingencies at the very moment of writing about Domino. We can offer a model of how those possible contingencies arise, and interact, according to the principles of self-organization, to explain the writer's metaphorical behavior without postulating the existence of any specific component of mind, such as an embodied conceptual metaphor or deliberate metaphor mechanism, as the *sole* driving force in the metaphor production process.

A major advantage of a dynamical view of metaphor performance, one that separates it from all other theories, is its ability to account for the coordination between speakers and listeners or authors and readers. For example, in face-to-face speech situations people coordinate along many different linguistic and nonlinguistic levels. Studies show that there are implicit "behavioral couplings" during interpersonal interaction in terms of people's gestures, eye-movement, body postures, laughter, lexical choice, syntax and prosody. To take two examples, people tend to engage in synchronous bodily behaviors, along many dimensions, when they are discussing a topic in which both speakers agree, compared to cases in which they diverge in their opinions (Paxton & Dale, 2014). Even people's brain activities become coordinated during talk (Stephens, Silbert & Hasson, 2010).

Many discourse studies have illustrated the ways that people tend to negotiate their use of metaphors, and what these expressions may mean in context (e.g., Cameron, 2011). But with the exception of important work on metaphorical speech and gesture (Müller & Cienki, 2009), metaphor theories have not explored how metaphorical language is integrated within the whole-body coordinated repertoires seen in interpersonal interactions. The coordination between two people using metaphorical language is an emergent product of self-organization. People do not produce or understand verbal metaphors because of some mental matching up of their different conceptual metaphorical representations or simply via the recognition that some metaphor was stated deliberately. Metaphorical meanings, and even embodied metaphorical concepts, are not properties of individual minds, but are higher-order products of the coupling among two or more individuals as they interact. Once again, multiple time-scales shape both individual and joint metaphor performance

7. Conclusion

Contemporary debates over what is the right level of analysis or best empirical method to adopt when studying metaphor has led to unproductive stalemates in which researchers glibly dismiss the general perspective or empirical findings offered by those working from different points of view. But arguments over whether an embodied or discourse perspective is best to study and explain metaphor, to take one example, is focused on the wrong question. The right question is-how do different temporal and spatial scales operate and interact with one another to give rise to particular metaphorical actions? Answering this question demands that scholars not assume that they can study some aspect of metaphor from their own autonomous point of view. They should also not assume that metaphor theories will eventually be able to add up the knowledge acquired from the study of metaphor at different levels of analysis or from using different research methods (e.g., those relevant to metaphor in language, thought, and communication). Instead, metaphor scholars must realize, and openly acknowledge that metaphorical actions, of all sorts, always emerge from the interaction of a constellation of forces which, again, operate along different time and spatial scales. What happens at the level of culture is shaped by actions at the purely linguistic level. What happens at the social level is always influenced by embodied actions and experience. What happens at the cognitive level is partly determined by neural and evolutionary constraints. The discourse level is always partly embodied, and, indeed, bodily experience is itself shaped by cultural and discourse factors. Most generally, every level of analysis is always in interaction with every other, such that human metaphorical actions should be properly characterized as dynamical, and not merely an assortment of isolated perspectives or properties of mind.

Embracing a dynamical perspective does not require that individual scholars study metaphor at multiple levels of analysis or use different research methods. Of course, discerning linkages between different kinds of analyses, and using different empirical paradigms, within an individual set of studies is always welcome and appreciated. Conducting this kind of dynamical studies may become an important future direction for metaphor studies, similar to what has been occurring in other areas of the cognitive sciences. Nonetheless, most of us are trained to study metaphor in specific ways, which makes it challenging to simply pick up other methods and focus on other levels of analysis.

My main plea, though, is for metaphor scholars to open themselves up to ideas and research findings from disparate research enterprises. Seeking convergences between one's own empirical results with those from the study of different levels of analysis will be critical to understanding the complexities of metaphorical action. These convergences are, once again, not simply additive across the existing level of description now seen in metaphor research. A dynamical view emphasizes that the various levels of analysis are interactive, such that what happens at one level always influences what is ongoing at other levels of analysis. Scholars will have to turn away from the automatic rejection of research from other levels, just because it offers explanations of metaphorical performance that differ from our own respective scholarly interests.

The single best thing to do as a first step is to read other people's research (e.g., discourse people need to read research from psycholinguistics on embodied conceptual metaphor use, and vice-versa). Doing so is not that difficult these days, especially given that many scholarly journals in the world of metaphor publish articles looking at different levels of analysis, and using varying research methods, often within the same issue. There is admittedly a great deal to

consider in the vast world of metaphor scholarship. But we should not continue to be like butterfly enthusiasts who insist that examining butterflies under glass or alternatively out in the wild of nature is the only way to understand butterflies. We may end many of the endless, unproductive debates about metaphor theory by appreciating that metaphor is always a multi-scaled full-bodied human performance. The imperative is to create theories of metaphorical action that take full account of what we know about how people really work in the real world.

References

Bak. P. (1997). *How nature works: The science of self-organized criticality*. Oxford: Oxford University Press.

Cameron, L. (2008). Metaphor and talk. In R. Gibbs (Ed). *The Cambridge handbook of metaphor and thought* (pp. 197-211). New York: Cambridge University Press.

Cameron, L., Maslen, R., Todd, Z., Maule, J., Stratton, P., & Stanley, N. (2009). The discourse dynamics approach to metaphor and metaphor-led discourse analysis. *Metaphor and Symbol*, *24*. 63–89.

Gibbs, R. (1994). *The poetics of mind: Figurative thought, language, and understanding.* New York: Cambridge University Press.

Gibbs, R. (2006). *Embodiment and cognitive science*. New York: Cambridge University Press.

Gibbs, R. (2012). Metaphors, snowflakes, and termite nests: How nature creates such beautiful things. In F. MacArthur, J-L. Oncins-Martinez, A. Piquer-Piriz and M. Sancez-Garcia (Eds.), *Metaphor in use: Culture, context,and communication.* Amsterdam: Benjamins.

Gibbs, R. (2013). Metaphoric cognition as social activity: Dissolving the divide between metaphor in thought and communication. *Metaphor and the Social World*, 3, 54-76.

Gibbs, R. (2015). Do pragmatic signals affect conventional metaphor understanding? A failed test of deliberate metaphor theory. *Journal of Pragmatics*. in press.

Gibbs, R., & Colston, H. (2012). *Interpreting figurative meaning*. New York: Cambridge University Press.

Gibbs, R., & Santa Cruz, M. (2012). Temporal unfolding of conceptual metaphoric experience. *Metaphor and Symbol, 27*, 299-311.

Grady, J. (1997). Theories are buildings revisited. *Cognitive Linguistics, 8*, 267-290.

Haser, V. (2005). *Metaphor, metonymy, and experientialist philosophy: Challenging*

Kövecses, Z. (2002). *Metaphor: A practical introduction* (2nd edition) New York: Oxford University Press.

Kövecses, Z. (2015). *Where metaphors come from: Reconsidering context in metaphor*. New York: Oxford University Press.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by.* Chicago: University of Chicago Press.

Lakoff, G. & Johnson, M. (1999). *Philosophy in the flesh. New York:* Basic Books.

McGlone, M. (2007). What is the explanatory value of a conceptual metaphor? *Language & Communication, 27, 109-126.*

Müller, C., & Cienki, A. (2009). Words, gestures, and beyond: Forms of multimodal metaphor in the use of spoken language. In C. Forceville & E. Urios-Aparisi (Eds.), *Multimodal metaphor* (pp. 297-328). Berlin: Mouton de Gruyter.

Quinn, N. (1992). The cultural basis of metaphor. In J. Fernandez (Ed.), *Beyond metaphor: The*

theory of tropes in anthropology (pp. 56-93). Stanford, California: Stanford University Press.

Paxton**, A.**, & Dale, R. (2013). Arguments disrupt interpersonal synchrony. *Quarterly Journal of Experimental Psychology*, *66*, 2092-210.

Rakova, M. (2003). *The extent of the literal: Metaphor, polysemy, and theories of concepts.* New York: Palgrave Macmillan.

Spivey, M. (2007). *The continuity of mind*. New York: Oxford University Press.

Steen, G. (2006). The paradox of metaphor: Why we need a three-dimensional model for metaphor. *Metaphor & Symbol, 23,* 213-241.

Steen, G. (2011). Issues in collecting converging evidence: Is metaphor always a matter of thought? In D. Schoenfeld (Ed.), *Converging evidence: Methodological and theoretical issues for linguistic research* (pp. 33-55). Amsterdam: Benjamins.

Stephens G., Gilbert, L., & Hasson, U. (2010). Speaker-listener neural coupling underlies successful communication. *PNAS, 107*, 144425-144430.

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

Zinken, J, Hellsten, I & Nerlich, B. (2008). Discourse metaphors. In R. Dirven, R. Frank, T. Ziemke & J. Zlatev (eds.), *Body, language, and mind: Vol. 2: Sociocultural situadtedness*. (pp. 363-385). Berlin: Mouton.