

The contemporary theory of metaphor

Conceptual metaphor

Chapter 6

J. Introduction

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of these characteristics of metaphor, Reddy was the first to demonstrate them by rigorous linguistic analysis, starting generalizations over voluminous examples. Reddy's chapter on how we conceptualize the concept of communication by metaphor gave us a tiny glimpse of an enormous system of conceptual metaphor. Since its appearance, an entire branch of linguistics and cognitive science has developed to study systems of metaphorical thought that we use to reason and base our actions on, and that underlie a great deal of the structure of language.

The bulk of the chapters in Orlony (1993[1979]), in which the present article appeared originally, were written before the development of the contemporary field of metaphor research. My chapter therefore contradicts much that appears in the other chapters of Orlony (1993[1979]), many of which make certain assumptions that were widely taken for granted in 1977. A major assumption that is challenged by contemporary research is the traditional division between literal and figurative language, with metaphor as a kind of figurative language. This entails a definition that is not metaphorical. In fact, the word "literal" has traditionally been used with one or more of a set of assumptions that have by definition, that: what is literal is not metaphorical. In fact, the word "literal"

1.2. Traditional false assumptions

- All everyday conventional language is literal, and none is metaphorical.
 - All subject matter can be comprehended literally, without metaphor.
 - Only literal language can be consistently true or false.
 - All definitions given in the lexicon of a language are literal, not metaphorical.
 - The concepts used in the grammar of a language are all literal; none are metaphorical.

The big difference between the contemporary theory and views of metaphor prior to Reddy's work lies in this set of assumptions. The reason for the difference is that, in the intervening years, a huge system of everyday, conventional, concepts has been discovered. It is a system of metaphor that structures our everyday conceptual system, including most abstract concepts, and that lies behind much of everyday language. The discovery of this enormous metaphor system has destroyed the traditional literal-figurative distinction, since the term "literal," as used in defining the traditional literal-figurative distinction, carries with it all those base assumptions.

A major difference between the contemporary theory and the classical one is based on the old literal-figurative distinction. Given that distinction, one might think that one "arrives at" a metaphorical interpretation of a sentence by "start-ing" with the literal meaning and applying some algorithmic process to it (see

Chapter 6: Conceptual metaphor

The contemporar y theory that metaphor is primarily conceptual, conventional, and part of the ordinary system of thought and language can be traced to Michael Reddy's (1993) now classic essay, "The Conduit Metaphor," which first appeared in the first edition of Ortony (1993 [1979]). Reddy did far more in that essay than he modestly suggested. With a single, thoroughly analyzed example, he allowed us to see, albeit in a restricted domain, that ordinary everyday English is largely metaphorical, dispelling once and for all the traditional view that metaphor is primarily in the realm of poetic or "figurative" language. Reddy showed, for a single, very significant case, that the locus of metaphor is thought, not language, that metaphor is a major and indispensable part of our ordinary, conventional way of conceptualizing the world, and that our everyday behavior reflects our metaphysical beliefs.

1.1. Homage to Ready

Phor is given by characterizing such cross-domain mappings. And in the process, everyday abstract concepts like time, states, change, causation, and purpose also turn out to be metaphorical.

The answer to both is yes. Indeed, there is a single general principle that answers both questions, but it is a general principle that is neither part of the grammar of English, nor the English lexicon. Rather, it is part of the conceptual system underlying English. It is a principle for understanding the domain of love in terms of the domain of journeys.

Is there a general principle governing how our patterns of inference about journeys are used to reason about love when expressions such as these are used?

Is there a general principle governing how these linguistic expressions about journeys are used to characterize love?

As a linguist and a cognitive scientist, I ask two commonplace questions: about love.

These are ordinary, everyday English expressions. They are not poetic, nor are they necessarily used for special rhetorical effect. Those like *look how far we've come*, which aren't necessarily about love, can readily be understood as being

We may have to bail out of this relationship.

We're spinning our wheels.
Our relationship is off the track.
The marriage is on the rocks.

We may have to go our separate ways.
The relationship isn't going anywhere.
We're in it a crossroads.

Look how far we've come.
It's been a long, bumpy road.
We can't turn back now.
We're on a new road.

can be understood that way:

Here love is being conceptualized as a journey, with the implication that the relationship is stalled, that the lovers cannot keep going the way they've been going, that they must turn back, or abandon the relationship altogether. This is not an isolated case. English has many everyday expressions that are based on a conception of love as a journey, and they are used not just for talking about love, but for reasoning about it as well. Some are necessarily about love; others

Our relationship has hit a dead-end street.

Imagine a love relationship described as follows:

2.1. Conceptual metaphor

Chapter 6: Conceptual metaphor 189

We will be discussing primarily they are the most robust.

- Let us now turn to some examples that are illustrative of contemporary metaphor research. They will mostly come from the domain of everyday conventional metaphor, since that has been the main focus of the research. I will turn to the discussion of poetic metaphor only after I have discussed the conventional system, since knowledge of the conventional system is needed to make sense of most of the poetic cases.
 - The evidence for the existence of a system of conventional conceptual metaphors is of five types:
 - Generalizations governing polysemy, that is, the use of words with a number of related meanings
 - Generalizations governing inference patterns, that is, cases where a pattern of inferences from one conceptual domain is used in another domain
 - Generalizations governing novel metaphorical language (see Lakoff and Turner 1989)
 - Generalizations governing patterns of semantic change (see Sweetser 1990)
 - Psychological experiments (see Gibbs 1990)

2. The contemporary theory: Some examples

Although the old inter-al-metaphorical distinction was based on assumptions that have proved to be false, one can make a different sort of inter-al-metaphorical distinction: those concepts that are not comprehended via conceptual metaphor might be called „literal“. Thus, although I will argue that a great many common concepts like causation and purpose are metaphorical, there is nonetheless an extensive range of non-metaphorical concepts. A sentence like *the balloon went up* is not metaphorical, nor is the old philosopher's favorite *the cat is on the mat*. But as soon as one gets away from concrete physical experience and starts talking about abstractions or emotions, metaphorical understanding is the norm.

I.3. What is not metaphorical

Seatrete 1993). Though there do exist cases where something like this happens, this is not in general how metaphor works, as we shall see shortly.

Two lovers are in a love relationship, pursuing common life goals. The relationship encounters some difficulty, which makes it nonlinear. If they do nothing, they will not be able to achieve their life goals. There are a limited number of alternatives for action: either by fixing it or getting it past them. They can try to get it moving again, either by fixing it or getting it past the difficulty.

- Two TRAVELLERS are in a VEHICLE, TRAVELLING WITH COMMON DESTINATIONS. They can try to get the vehicle moving again, either by fixing it or getting past the IMPEDIMENT that stopped it.
- They can remain in the nonfunctional VEHICLE and give up on REACHING THEIR DESTINATIONS.
- They can abandon the VEHICLE.
- The alternative of remaining in the nonfunctional VEHICLE takes the least effort, but does not satisfy the desire to REACH THEIR DESTINATIONS.

We're stuck can be used of travel, and when it is, it evokes knowledge about travel. The exact knowledge may vary from person to person, but there is a typical example. The exact knowledge may vary from person to person, but here is a typical example in the ontology of travel, that is, in the source domain of the LOVE-IS-A-URNBY mapping given above.

The LOVE-AS-JOURNEY mapping is a set of ontological correspondences that characterize epistemic correspondences by mapping knowledge about journeys onto knowledge about love. Such correspondences permit us to reason about love using the knowledge we use to reason about journeys. Let us take an example. Consider the expression, "we're stuck", said by one lover to another about their relationship. How is this expression about travel to be understood as being about

Chapter 6: Conceptual metaphor 191

If mapnames are confused with names of mappings, another misunderstanding can arise. Names of mappings commonly have a propositional form, for example, LOVE IS A JOURNEY. But the mappings themselves are not propositions. If mappings are confused with names for mappings, one might mistakenly think that, in a set of correspondences,

Differences in the relationship correspond to impediments to travel. It is a common mistake to confuse the name of the mapping, love is a journey, for the mapping itself. The mapping is the set of correspondences, Thus, whenever I refer to a metaphor by a mnemonic like love is a journey, I will be referring to such a journey.

- The love relationship corresponds to the vehicle.
- The lovers' common goals correspond to their common destinations on the road.

THE LOVE-AS-JOURNEY MAPPING

To make it easier to remember what mappings there are in the conceptual system, Johnson and Lakoff (1980) adopted a strategy for naming such mappings, using mnemonics which suggest the mapping. Mnemonic names such as 'TARGET-DOMAIN AS SOURCE-DOMAIN' typically (though not always) have the form: TARGET-DOMAIN IS SOURCE-DOMAIN, or alternatively, TARGET-DOMAIN AS SOURCE-DOMAIN. In this case, the name of the mapping is 'LOVE IS A JOURNEY'. When I speak of the love is a journey metaphor, I am using a mnemonic for a set of ontological correspondences that characterize a mapping, namely:

The metaphor involves understanding one domain of experience, love, in terms of a very different domain of experience, journeys. More technically, the metaphor can be understood as a mapping (in the mathematical sense) from a source domain (in this case, journeys) to a target domain (in this case, love). The map-ping is highly structured. There are ontological correspondences, according to which entities in the domain of love (e.g., the lovers, their common goals, their difficulties, the love relationship, etc.) correspond systematically to entities in the

The lovers are travelers on a journey together, with their common life goals seen as destinations to be reached. The relationship is their vehicle, and it allows them to pursue those common goals together. The relationship is seen as fulfilling its purpose as long as it allows them to make progress toward their common goals. The journey isn't easy. There are impediments, and there are places (crossroads) where a decision has to be made about which direction to go in and whether to keep traveling together.

The principle can be stated informally as a metaphorical scenario:

The fact that the love-is-a-journey mapping is a hexed part of our conceptual system explains why new and imaginative uses of the mapping can be understood instantly, given the ontological correspndences and other knowledge about journeys. Take the song lyric, *We're driving in the fast lane on the freeway of love*. The traveling knowledge called upon is this: when you drive in the fast lane, you go a long way in a short time and it can be exciting and dangerous. The general metaphorical mapping maps this knowledge about driving into knowledge about love relationships. The danger may be to the vehicle (the relationship may not last) or the passengers (the lovers may be hurt emotionally). The excitement of the love journey is sexual. Our understanding of the song lyric is a consequence of the preexisting metaphysical correspondences of the love is a journey metaphor.

2.4. / Novel extensions of conventional metaphors

- That is, the existence of the mapping provides a general answer to two questions:

 - Why is the existence of the mapping provides a general answer to two questions:
 - Why are words for travel used to describe love relationships?
 - Why are inference patterns used to reason about travel also used to reason about love relationships?
 - Such cross-domain pairings of words and of inference patterns provides evidence for the existence of such mappings.

2.3. Generalizations

as metonymics to name mappings. Thus, when we refer to the love is a journey English sentence love is a journey, on the other hand, is a metaphorical expression that is understood via the set of correspondences discussed above.

It should be noted that contemporary metaphor theorists commonly use the term "metaphor" to refer to the conceptual mapping, and the term "metaphorical expression" to refer to an individual linguistic expression (like *dead-end street*) that is sanctioned by a mapping. We have adopted this terminology for the following reason: Metaphor, as a phenomenon, involves both conceptual mappings and individual linguistic expressions. It is important to keep them distinct. Since it is the mappings that are primary and that state the generalizations that are our principal concern, we have reserved the term "metaphor" for the mappings, rather than for the linguistic expressions.

This view of metaphor is thoroughly at odds with the view that metaphors are just linguistic expressions. If metaphors were merely linguistic expressions, we would expect different linguistic expressions to be different metaphors. Thus, are just linguistic expressions. If metaphors were merely linguistic expressions, we would expect different linguistic expressions to be different metaphors. Thus, we hit a dead-end street would constitute one metaphor. We can't turn back now would constitute another, entirely different metaphor. Their marriage is on the rocks would involve still a different metaphor. And so on for dozens of examples. Yet we don't seem to have dozens of different metaphors here. We have one metaphor, in which love is conceptualized as a journey. The mapping tells us precisely how love is being conceptualized as a journey. And this unified way of conceptualizing love metaphorically is realized in many different linguistic

2.2. Metaphors are not mere words

This is an example of an inference pattern that is mapped from one domain to another. It is via such mappings that we apply knowledge about travel to love

They can abandon the RELATIONSHIP.
The alternative of remaining in the nonfunctional RELATIONSHIP takes the
least effort, but does not satisfy the desire to ACHIEVE life GOALS.

They can remain in the nonfunctional RELATIONSHIP, and give up on

It should be no surprise that the generalization is at the superordinate level, while the special cases are at the basic level. After all, the basic level is the level of rich mental images and rich knowledge structure. (For a discussion of the properties of basic level categories, see Lakoff 1987; 31–50.) A mapping at the superordinate level maximizes the possibilities for mapping rich conceptual structures in the source domain onto the target domain, since it permits many basic level instances, each of which is information rich.

In the LOVE-IS-A-JOURNEY mapping, a love relationship corresponds to a vehicle. A vehicle is a superordinate category that includes such basic-level categories as car, train, boat, and plane. The examples of vehicles are typically drawn from this range of basic-level categories: car (*long bumpy road, spinning our wheels*), train (*off the track*), boat (*on the rocks, founders*), plane (*just taking off, bail-ing out*). This is not an accident; in general, we have found that mappings are at the superordinate rather than the basic level. Thus, we do not find fully general submaps like a LOVE RELATIONSHIP IS A CAR; when we find a love relationship conceptualized as a car, we also tend to find it conceptualized as a boat, a train, a plane, and so forth. It is the superordinate category VEHICLE not the basic-level category CAR that is in the general mapping.

2.2. Mappings are at the superordinate level

The love is a journey metaphor applies to this knowledge about the image. It maps this knowledge onto knowledge about love relationships: a lot of energy is being spent without any progress toward fulfilling common goals, the situation will not change of its own accord, it will take a lot of effort on the part of the lovers to make more progress, and so on. In short, when idioms have associated conventional images, it is common for an independent metaphor motivated by metaphor to map that knowledge from the source to the target domain. For a survey of experiments verifying the existence of such images and such mappings, see Gibbs (1990).

An idiom like *spinning one's wheels* comes with a conventional mental image, that of the wheels of a car stuck in some substance — mud, sand, snow, or ice — so that the car cannot move when the motor is engaged and the wheels turn. Part of our knowledge about what image is that a lot of energy is being used up (in spinning the wheels) without any progress being made, that the situation will not readily change of its own accord, that it will take a lot of effort on the part of the occupants to get the vehicle moving again — and that may not even be possible.

rather motivated. That is, they do not arise automatically by productive rules, but they fit one or more patterns present in the conceptual system. Let us look a little

Chapter 6: Conceptual metaphor 195

2.5. Motivation

3. The possibility for understanding novel extensions in terms of the conventional correspondences.

2. The use of metaphor to govern reasoning and behavior based on that reasoning.

1. The systematicity in the linguistic correspondences.

The song lyric is instantly comprehensible to speakers of English because those metaphorical correspondences are already part of our conceptual system. The love is a journey metaphor and Reddy's Conduit Metaphor were the two examples that first convinced me that metaphor was not a figure of speech, but a mode of thought, defined by a systematic mapping from a source to a target domain. What convinced me were the three characteristics of metaphor that I have just discussed:

194 George Lakoff

If X is in container A and container B, then X is in container B. This is true only by virtue of any logical deduction, but by virtue of the topological properties of containers. Under the CLASSICAL CATEGORIES ARE CONTAINER properties of containers, the logical properties of categories are inherited from the logical properties of containers. One of the principal logical properties of classical categories is that the classical syllogism holds for them. The classical syllogism,

If X is in category A and category A is in category B, then X is in category B

Thus, the logical properties of classical categories can be seen as following from the topological properties of containers plus the metaphorical mapping from containers to categories. As long as the topological properties of containers are preserved by the mapping, this result will be true.

In other words, there is a generalization to be stated here. The language of containers applies to classical categories and the logic of containers is true of classical categories. A single metaphorical mapping ought to characterize both the linguistic and logical generalizations at once. This can be done provided that the topological properties of containers are preserved in the mapping.

The joint linguistic-and-metaphorical relation between containers and classical categories is not an isolated case. Let us take another example.

is of the form:

Thus, a prediction is made about convolutional mappings: the categories mapped will tend to be at the superordinate rather than the basic level. One tends not to find mappings like A LOVE RELATIONSHIP IS A CAR OR A LOVE RELATIONSHIP IS A BOAT. Instead, one tends to find both basic level cases (e.g., both cars and boats), which indicates that the generalization is one level higher, at the superordinate level of the vehicle. In the hundreds of cases of conventional mappings studied so far, this prediction has been borne out: it is superordinate categories that are used in mappings.

3. Basic semantic concepts that are metaphorical

Most people are not too surprised to discover that emotional concepts like love and anger are understood metaphorically. What is more interesting, is the realization that many of the most basic concepts in our language are understood metaphorically. And I think more exciting, is the realization that many of the most basic concepts in our conceptual systems are also normally comprehended via metaphor - concepts like time, quantity, state, change, action, causation, purpose, means, modality, and even the concept of a category. These are concepts that enter normally into the grammar of languages, and if they are indeed metaphorical in nature, then metaphor becomes central to grammar.

I would like to suggest that the same kinds of considerations that lead to our acceptance of the love as a journey metaphor lead inevitably to the conclusion that such basic concepts are often, and perhaps always, understood via metaphor.

3.1. Categories

Classical categories are understood metaphorically in terms of bounded regions, or "containers." Thus, something can be in or out of a category, it can be put into a category or removed from a category. The logic of classical categories is the logic of containers (see Figure 1).

logic of containers (see Figure 1).

3.2. Quantity and linear scales

The concept of quantiles involves at least two metaphors. The first is the well-known more is up, less is down metaphor as shown by a myriad of expressions like prices rose, stocks skyrocketed, the market plummeted, and so on. A second that linear scales are paths. We can see this in expressions like:

Dobhn's intelligence goes way beyond Bill's.

The metaphor maps the starting point of the path onto the bottom of the scale and maps distance travelled onto minimality in general.

X is in A
A is in B
 \therefore X is in B

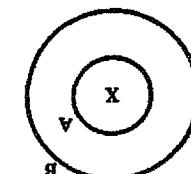


Figure 7.

Similarly, for sentences like John's intelligence goes beyond Bill's, the nonmetaphorical analysis would claim that *go* is not fundamentally a verb of motion at all, but is somehow neutral between motion and a linear relation. This would also be bizarre. In short, if one grants that *ahead of* and *go* are fundamentally spatial, then the fact that they can also be used of linear scales suggests a metaphor solution. There could be no such neutral sense of *go* for these cases, since *go beyond* in the spatial sense involves motion, while in the linear scale sense, there is no motion or change, but just a point on a scale. Here the neutral case solution is not even available.

What is particularly interesting is that the logic of paths maps onto the logic of linear scale (see Figure 2).

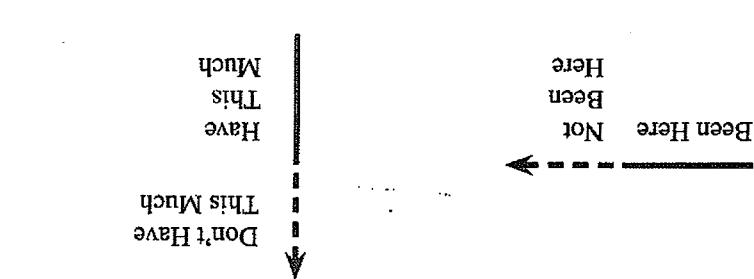


Figure 2.

Example: If you are going from San Francisco to New York along Route 80, and you are now at Chicago, then you have been to Denver but not to Pittsburgh. Linear scale inference: if you have exactly \$50 in your bank account, then

you will be true of any path image-scheme. Again, the cognitive topology of paths. It will be true of any path image-scheme. The form of these inferences is the same. The path inference is a consequence of the cognitive topology of paths. It would be stated, it would be stated that metaphorical generalization to be stated, it would be stated that metaphors in general

mediate point B, then you have been at all points between A and B and not at any points between B and C. Path inference: if you are going from A to C, and you are now at an intermediate point B, then you have been at all points between A and B and not at any points between B and C.

Linear scale inference: if you have \$40, \$30, and so on, but not \$60, \$70, or any larger amount,

One should instead think of the Invariance Principle as: if one looks at the existing correspondences, one will see that the Invariance Principle holds: source domain interiors correspond to target domain interiors; source domain exteriors correspond to target domain exteriors; source domain source domains the target domain map onto the target domain unless the target domain copies it onto the image-schematic structure of the source domain, then one would lead to a mistaken understanding of the Invariance Principle, namely, that wind up with target domain structure. Such a mistaken understanding of mappings as algorithmic processes that "start" with source domain structure and To understand the Invariance Principle property, it is important not to think of

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The time will come when . . . I have gone when . . . The time for action has arrived. That time is here. In the weeks following next Thursday . . . On the preceding day . . . I'm looking ahead to Christmas.

This metaphor, TIME PASSING IS MOTION, with its two special cases, embodies a generalization that accounts for a wide range of cases where a spatial expression can also be used for time. Special case 1, TIME PASSING IS MOTION OF AN OBJECT, accounts for both the linguistic form and the semantic entailments of expressions like:

Time has extension, and can be measured.
Bentallum: An extended time, like a spatial area, may be conceived of as a bounded region.

- If time 2 follows time 1, then time 2 is in the future relative to time 1.
- The time passing the observer is the present time.
- Time has a velocity relative to the observer.
- Special case 2:
- Times are fixed locations; the observer is moving with respect to time.

The passing of time is motion.	Future times are in front of the observer; past times are behind the observer.	One thing is moving, the other is stationary; the stationary entity is the delictic centre.	Since motion is continuous and one-dimensional, the passage of time is continuous and one-dimensional.	Special case I:
Present:	Both alike;	One is moving, the other is stationary.	Since motion is continuous and one-dimensional, the passage of time is continuous and one-dimensional.	The observer is fixed; times are entities moving with respect to the observer.
Times are oriented with their fronts in their direction of motion.	Past times are behind the observer.	Future times are in front of the observer.	Times are oriented with their fronts in their direction of motion.	Times are oriented with their fronts in their direction of motion.
Times are oriented with their fronts in their direction of motion.	Past times are behind the observer.	Future times are in front of the observer.	Times are oriented with their fronts in their direction of motion.	Times are oriented with their fronts in their direction of motion.

Ontology: Time is understood in terms of things (that is, entities and locations) and motion.

Background condition: The present time is at the same location as a canonical observer.

Chapter 6: Conceptual metaphor 201

It has often been noted that the time in English is conceptualized in terms of space. The details are rather interesting.

3.6. Time

Spatial differences are characterized by the topological structure of image schemes. We have seen cases such as categories are contained and linear scales are paths where image-scheme structure is preserved by metaphor and where abstract differences about categories and linear scales are metaphoric versions of spatial differences about containers and linear paths. The invariant principle hypothesis that image-scheme structure is always preserved by metaphor, that is, that such concepts are fundamentally characterized by metaphor.

3.5. Abstract inferences as metaphorical spatial inferences

A corollary of the **Invariance Principle** is that image-schema structure is inherently limited by the target domain cannot be violated, and that inherent target domain structure limits the possibilities for mappings automatically. This general principle explains a large number of previously mysterious automatical limitations on metaphorical mappings. For example, it explains why you can give someone a **kick**, even if that person doesn't have it afterwards, and why you can give someone a **kick**, even if they don't lose it. This is a consequence of the fact that inherent target domain structure automatically limits what can be mapped. For example, consider that part of your inherent knowledge of actions that says that actions do not continue to exist after they occur. Now consider the **ACTIONS ARE TRANSFERS** metaphor, in which actions are conceptualized as objects transferred from an agent to a patient, as when one gives someone a **kick** or a **punch**. We know (as part of target domain knowledge) that an action does not exist after it occurs. In the source domain where there is a **kick**, the recipient possesses the object given after the giving. But this cannot be mapped onto the target domain since the inherent structure of the target domain says that no such object exists after the action is over. The target domain overrides in the **Invariance Principle** explains why you can give someone a kick without his having it afterwards.

3.4. Target domain overriders

The two special cases (location and object) of the TIME PASSING IS MOTION metaphor are not merely an accidental feature of our understanding of time. As we shall see below, there are other metaphors that come in such location/object pairs. Such pairs are called "duals," and the general phenomenon in which metaphors come in location/object pairs is referred to as "duality."

3.7. Duality

that is important to recall that metaphorical mappings are fixed correspondences. Thus, it is possible like *The time for action has arrived* by reading it first trying to give a literal reading to arrive, and then, on rereading, trying to give the metaphor of time as a stationary land-*ing weeks*. Here, *within* makes use of the metaphor of time as a bounded region which has extension and bounded regions, whereas *coming* makes use of the metaphor of time as moving objects. This is possible because the two meta- phors for time pick out different aspects of the target domain. The coming weeks conceptualizes those weeks as a whole, in motion relative to the observer. Within docks inside that whole, conceptualizing it as a bounded region with an interior. Each mapping is used partially. Thus, although the mappings may be consistently superimposed, the variance principle allows such parts of the mappings to be picked out and used to characterize reasons about different aspects of the situation, there are cases where parts of the mappings may be consistently mapped onto each other. Thus, each mapping onto different parts of the sentence. Within reflects a life-time is a day, with death as night. This one line has three death is departure, gentle reflects life is a struggle, with death as defeat. Dylan Thomas line "Do not go gentle into that good night!" Here go reflects stimulateous mappings are very common in poetry. Take, for example, the target domain.

3.8. Simultaneous mappings

This is possible since mappings are fixed correspondences.

Simultaneous mappings are very common in poetry. Take, for example, the Dylan Thomas line, "Do not go gentle into that good night." Here go reflects death is departure, gentle reflects life is a struggle, with death as defeat. Night reflects a lifetime is a day, with death as night. This one line has three different metaphors for death, each mapped onto different parts of the sentence.

Thus, it is possible for two different parts of a sentence to make the same use of two distinct metaphotic mappings at once. Consider a phrase like, *within the coming weeks*. Here, *within* makes use of the metaphor of time as a stationary landings weeks. Within which has extension and bounded regions, whereas *coming* makes use of escape the metaphor of times as moving objects. This is possible because the two metaphors for time pick out different aspects of the larger domain. The coming weeks concentrates those weeks as a whole, in motion relative to the observer. Within docks inside that whole, conceptualizing it as a bounded region with interior. Each mapping is used partially. Thus, although the mapping with intensity superimposed, the Invariance Principle allows such parts of the mappings to interpenetrate, there are cases where parts of the mappings may be consistently incompatible. The Invariance Principle also allows such parts of the mappings to interpenetrate, there are cases where parts of the mappings may be consistently incompatible.

of correspondences.

It is important to recall that metaphtorical mappings are fixed correspondences that can be activated, rather than algorithmic processes that take inputs and give outputs. Thus, it is not the case that sentences containing conventional metaphors are the products of a real-time process of conversion from literal to metaphorical readings. A sentence like *The time for action has arrived* is not understood by first trying to give a literal reading to arrive, and then, on failing, trying to give a temporal reading. Instead, the metaphor TIME PASSING IS MOTION is a fixed structure of existing correspondences between the space and time domains, and active has a conventional extended meaning that makes use of that fixed structure.

Addressing unmet needs 101

The two special cases (location and object) of the TIME PASSING IS MOTION metaphor are not merely an accidental feature of our understanding of time. As we shall see below, there are other metaphors that come in such location/object pairs that are not merely general phenomena in which metaphors come in location/object pairs is referred to as "duality".

Thus, special case I characterizes the general principle behind the temporal use of words like come, go, here, follow, precede, ahead, behind, fly, pass, account-ing not only for why they are used for both space and time, but why they mean what they mean.

The future. Time is flying by. The time has passed when . . .
Thanksgiving is coming up on us. Let's put all that behind us. I can't face

The details of the two special cases are rather different; indeed, they are incongruous. The system with one another. The existence of such special cases has an especially interesting theoretical consequence: words mapped by both special cases will have inconsistent readings. Take, for example, the come of Christmas is coming (special case 1) and We're coming up on Christmas (special case 2). Both instances of come are temporal, but one takes a moving time as first argument and the other takes a moving observer as first argument. The same is true of pass in The time has passed (special case 1) and in He passed the time (special case 2). These differences in the details of the mappings show that one cannot just say bithey likely that spatial expressions can be used to speak of time, without specifying details, as though there were only one correspondence between time and space. When we are explicit about stating the mappings, we discover that there are two different – and inconsistent – subcases.

The fact that time is understood metaphorically in terms of motion, entities, and locations accords with our biological knowledge. Thus, it makes good biological sense that time should be understood in terms of things and motion.

He stayed there a long time. His stay in Russia extended over many years. He passed the time happily. He arrived on time. We're coming up on Christmas. We're getting close to Christmas. He'll have his degree within two years. I'll be there in a minute.

Special case 2 maps location expressions like down the road, for + location, long over, come, close to, within, in, pass, onto corresponding temporal expressions with their correlative meanings. Again, special case 2 states a general principle relating spatial terms and inference patterns to temporal terms and locations relative to the road, the town, the place, the house, for example.

- Aids to action are aids to motion:
 - It is smooth sailing from here on in. It's all downhill from here.
 - There's nothing in our way.
- A different means of achieving a result is a different path:
 - Do it this way. She did it the other way. Do it any way you can. However you want to go about it is fine with me.
 - Manner of action is manner of motion:
- We are moving/runnung/skipping/right along. We sloganized through it. He is falling around. He is falling all over himself. We are leapling over hurdles. He is out of step. He is in step.

- Manner of action is manner of motion.
- A different means for achieving a purpose is a different path.
- Forces affecting action are forces affecting motion.
- The inability to act is the inability to move.
- Progress made is distance travelled or distance from goal.
- We will consider examples of each of these one by one, including a number of special cases.

To see just how rich the event structure metaphor is, consider some of its basic entailments:

- Burdens: He's carrying quite a load. He's weighed down by a lot of assignments. He's been trying to shoulder all the responsibility. Get off my back!
- Countertop: Quite pushing me around. She's leading him around by the nose. She's holding him back.
- Lack of an energy source: Lack of an energy source:
- I'm out of gas. We're running out of steam.

- He's got over his divorce. He's trying to get around the regulations.
- He went through the trial. We ran into a brick wall. We've got him boxed into a corner.
- Features of the terrain:
- He's between a rock and a hard place. It's been uphill all the way. We've been bogged down. We've been hacking our way through a jungle of regulations.

features of the terrain; burdens; counter-forces; lack of an energy source. Here are examples of each:

204 George Lakoff

- Causes are forces.
- Changes are movements (into or out of bounded regions).
- States are locations (bounded regions in space).
- Actions are self-propelled movements.
- Purposes are destinations.
- Means are paths (to destinations).
- Difficulties are impediments to motion.
- Expected progress is a travel schedule; a schedule is a virtual traveler, who reacts to obstacles.
- Internal events are large, moving objects.
- Long term, purposeful activities are journeys.
- This mapping generalizes over an extremely wide range of expressions for one or more aspects of event structure. For example, take states and changes. We speak of being in or out of a state, of going into or out of it, of entering or leaving it, of getting to a state or emerging from it.

I now want to turn to some research by myself and some of my students (especially Sharon Fischer, Katri Myhr, and Jane Espenson) on the metaphorical understanding of event structure in English. What we have found is that various aspects of event structure, including notions like states, changes, processes, actions, causes, and means, are characterized cognitively via metaphor in terms of space, motion, and force.

The general mapping we have found goes as follows:

4. Event structure

Careful action is careful motion:	Line line. I'm walking on eggshells. He is treading on thin ice. He is walking a fine line.	Speed of action is speed of movement: He flew through his work. He is running around. It is going swim-mingly. Keep things moving at a good clip. Things have slowed to a crawl. She is going by leaps and bounds. I am moving at snail's pace.	Making progress is forward movement: We are moving ahead. Let's forge ahead. Let's keep moving forward. We made lots of forward movement.	Undoing progress is backward movement: We are sliding backward. We are backsliding. We need to back-track. It is time to turn around and retrace our steps.	Starting an action is starting out on a path: We are just starting out. We have taken the first step.	Succes is reaching the end of the path: We've reached the end. We are seeing the light at the end of the tunnel. We only have a short way to go. The end is in sight. The end is a long way off.	Lack of purpose is lack of direction: He is just floating around. He is drifting aimlessly. He needs some direction.	We are at a standstill. We aren't getting anywhere with this, going anywhere. We are going nowhere.	External events are large moving objects: How're things going? Things are going fine with me. Things are going against me these days. Things took a turn for the worse. Things are going my way.	Special case 2: Fluids
Special case 3: Horses	You gotta go with the flow. I'm just trying to keep my head above water. The tide of events . . . The winds of change . . . Try to keep a tight rein on the situation. Keep a grip on the situation. Don't let things get out of hand. Wild horses couldn't make me go. "Whoa!" (said when things start to get out of hand).	Purposive action is self-propelled motion to a destination; this has the following special cases: Speed of action is speed of movement: The flow of history . . . I'm trying to get my bearings. He's up a creek without a paddle. We're all in the same boat.	Making progress is forward movement: We are moving ahead. Let's forge ahead. Let's keep moving forward. We made lots of forward movement.	Unndoing progress is backward movement: We are sliding backward. We are backsliding. We need to back-track. It is time to turn around and retrace our steps.	Starting an action is starting out on a path: We are just starting out. We have taken the first step.	Succes is reaching the end of the path: We've reached the end. We are seeing the light at the end of the tunnel. We only have a short way to go. The end is in sight. The end is a long way off.	Lack of purpose is lack of direction: He is just floating around. He is drifting aimlessly. He needs some direction.	We are at a standstill. We aren't getting anywhere with this, going anywhere. We are going nowhere.	External events are large moving objects: How're things going? Things are going fine with me. Things are going against me these days. Things took a turn for the worse. Things are going my way.	Special case 1: Things
4.1. Inheritance hierarchies	Such examples provide overwheleming empirical support for the existence of the event structure metaphor.	Level 1: The event structure metaphor Level 2: A purposeful life is a journey Level 3: Love is a journey; a career is a journey	To refresh your memory, recall:	The event structure metaphor Source domain: Space Target domain: Events	Changes are movements (into or out of bounded regions). States are locations (bound regions in space). Actions are self-propelled movements. Causes are forces. Means are paths to destinations. Purposes are destinations.	External events are large moving objects: How're things going? Things are going fine with me. Things are going against me these days. Things took a turn for the worse. Things are going my way.	Extremeal events are large, moving objects: How're things going? Things are going fine with me. Things are going against me these days. Things took a turn for the worse. Things are going my way.	Extremeal events are large moving objects: How're things going? Things are going fine with me. Things are going against me these days. Things took a turn for the worse. Things are going my way.	Extremeal events are large moving objects: How're things going? Things are going fine with me. Things are going against me these days. Things took a turn for the worse. Things are going my way.	Special case 2: Fluids

Such examples provide overwhelming empirical support for the existence of the event structure metaphor. And the existence of that metaphor shows that the most common abstract concepts – TIME, STATE, CHANGE, CAUSATION, ACTION, PURPOSE – are conceptually systems, the fact that they are conceptually systems organized in hierarchical structures, in which “lower” mappings in the hierarchy inherit the structures of the “higher” mappings. Let us consider an example of a hierarchy with three levels:

Metaphorical mappings do not occur isolated from one another. They are sometimes organized in hierarchical structures, in which “lower” mappings in the hierarchy inherit the structures of the “higher” mappings. Let us consider an example of a hierarchy with three levels:

Level 1: The event structure metaphor
Level 2: A purposeful life is a journey
Level 3: Love is a journey; a career is a journey

4.1. Inheritance hierarchies

Such examples provide overwheleming empirical support for the existence of the event structure metaphor.

Try to keep a tight rein on the situation. Keep a grip on the situation. Don't let things get out of hand. Wild horses couldn't make me go. "Whoa!" (said when things start to get out of hand).

Special case 3: Horses

You gotta go with the flow. I'm just trying to keep my head above water. The tide of events . . . The winds of change . . .

The flow of history . . . I'm trying to get my bearings. He's up a creek without a paddle. We're all in the same boat.

Line line.
I'm walking on eggshells. He is treading on thin ice. He is walking a fine line.

Careful action is careful motion:

I'm walking on eggshells. He is treading on thin ice. He is walking a fine line.

Speed of action is speed of movement:

He flew through his work. He is running around. It is going swim-mingly. Keep things moving at a good clip. Things have slowed to a crawl. She is going by leaps and bounds. I am moving at snail's pace.

Making progress is forward movement:

We are moving ahead. Let's forge ahead. Let's keep moving forward. We made lots of forward movement.

Undoing progress is backward movement:

We are sliding backward. We are backsliding. We need to back-track. It is time to turn around and retrace our steps.

Starting an action is starting out on a path:

We are just starting out. We have taken the first step.

Succes is reaching the end of the path:

We've reached the end. We are seeing the light at the end of the tunnel. We only have a short way to go. The end is in sight. The end is a long way off.

Lack of purpose is lack of direction:

He is just floating around. He is drifting aimlessly. He needs some direction.

We are at a standstill. We aren't getting anywhere with this, going anywhere. We are going nowhere.

External events are large moving objects:

How're things going? Things are going fine with me. Things are going against me these days. Things took a turn for the worse. Things are going my way.

Special case 1: Things

Special case 2: Fluids

Such hierarchical organization is a very prominent feature of the metaphor system of English and other languages. So far we have found that the metaphors higher up in the hierarchy tend to be more widespread than those mappings at the bottom of the hierarchy.

The hierarchy also allows us to characterize lexical items whose meanings are more restricted: Thus, combining the ladder refers only to careers, not to love

The second generalization is integral in character. Thus the understanding of difficulties as impediments to travel occurs not only in events in general, but also in a purposeful life, in a love relationship, and in a career. The inheritance hierarchy guarantees that this understanding of difficulties in life, love, and careers

In the hierarchy, shows one to state a generic principle: *classical* is excluded lexically via the submitaphor of the event structure; *long-term* purposesful activities are journeys. All its other uses are automatically generated via the inheritance hierarchy. Thus, separate senses for each level of the hierarchy are not needed.

I'm at a crossroads on this project. I'm at a crossroads in my life. We're at a crossroads in our relationship. I'm at a crossroads in my career.

This inheritance hierarchy accounts for a range of generalizations. First, there are generalizations about lexical items. Take the word *crossroads*. Its central meaning is in the domain of space, but it can be used in a metaphorical sense to speak of any extended activity, of one's life, or a love relationship, or of a career.

He clawed his way to the top. He's over the hill. She's on the fast track.
He's climbing the corporate ladder. She's moving up in the ranks quickly.

Examples include: **high**, **rac**, and **last as possible**.

A careerist is a traveler.
Status is up.
Inheriting life is a journey, with life goals = career goals. Ideal: to go as

A CAREER IS A JOURNEY
- Target domain: Career Source domain: Space

special cases of life goals.

A career is another aspect of life that can be conceptualized as a journey. Here, because status is up, a career is actually a journey inward. Career goals are

- The love relationship is a vehicle.
- Linchets the life is a journey metaphor.

- LOVE IS A JOURNEY
 - Target domain: Love Source domain: Space
 - The lovers are travelers.
- JUST AS SIGNIFICANT LIFE EVENTS ARE SPECIAL CASES OF LIFE EVENTS, SO EVENTS IN A LOVE RELATIONSHIP ARE SPECIAL CASES OF LIFE EVENTS. THUS, THE LOVE IS A JOURNEY METAPHOR INHERITS THE STRUCTURE OF THE JOURNEY METAPHOR. WHAT IS SPECIAL ABOUT THE LOVE IS A JOURNEY METAPHOR IS THAT THERE ARE TWO LOVERS WHO ARE TRAVELERS AND THAT THE LOVE RELATIONSHIP IS A VEHICLE. THE REST OF THE MAPPING IS A CONSEQUENCE OF IMHERITING THE JOURNEY METAPHOR. BECAUSE THE LOVERS ARE IN THE SAME VEHICLE, THEY HAVE COMMON DESTINATIONS, THAT IS, COMMON LIFE GOALS. RELATIONSHIP DIFFICULTIES ARE IMPEDIMENTS TO TRAVEL.

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

Thus we have expressions like:

- Targeted domain: Life
- Source domain: Space
- The person leading a life is a traveler.
- Inherits event structure metaphor, with:
 - Events = significant life events
- Purposes = life goals

In short, the metaphor of a purposeful life is a JOURNEY makes use of all the structure of the event structure metaphor, since events in a life conceptualized as purposeful are subcases of events in general.

In our culture, life is assumed to be purposeful; that is, we are expected to have goals in life. In the event structure metaphor, purposes are descriptive of navel motion in life, and hence a journey. A purposeful life is a long-term, purposeful activity, and hence a destination. Goals in life are descriptive of one's actions toward a goal. Goals in life are means to achieve a goal, which is choosing a path to a destination. Choosing a means to achieve a goal is choosing a path to a destination. Difficulties in life are impediments to motion. Extreme events are large moving objects that can impede motion toward one's goals. One's expected process through life is charted in terms of a life schedule, which is conceptualized as a virtual traveler that one is expected to keep up with.

Long-term, purposeful activities are journeys.

There is also a hierarchical structure in the object-version of the event structure metapAVOR. A special case of getting an object as getting an object to eat. Hence:

opportunity. He found success.

Reach for/grab all the gusto you can get. Latch onto a good job. Seize the it. It escaped me. It slipped through my hands. He is pursuing a goal.

They just handed him the job. It's within my grasp. It eluded me. Go for

ACHIEVING A PURPOSE IS ACQUIRING A DESIRED OBJECT

Here are some examples:

The submapping purposes are DESTINATIONS also has a dual. Destinations are desired locations and so the submapping can be repurposed as purposes are desired locations and so the submapping is achieving a purpose is acquiring a desired object (or ridding of objects). Replicating "location" by "object", we get the dual purposes are desired locations, and achieving a purpose is replicating a desired location. Replicating "location" by "object", we get the dual purposes are desired objects, and achieving a purpose is replicating a desired object (or ridding of objects).

- States are locations.
 - Changes are movements (to or from locations).
 - Causes are forces (controlling movement to or from locations).

These are the duals of:

of carrying away).

Changes are movements (of possessions, namely, acquisitions or losses). Causes are forces (controlling the movement of possessions, namely, giving

Attributes are possessions. Metaphor:

Given this, we can see that there is an object-version of the event structure π based on sequences.

Since states and territories are also special cases of the same thing - what can be attributed to someone.

Thus, STATES ARE LOCATIONS and ATTRIBUTES ARE POSSESSIONS are duals, since possession and location are special cases of the same thing — CO-LOCATION — and except that they are conceptualized as possessive objects.

metaphorically as co-locations. In *I'm in trouble*, trouble is a state. A state is an attribute conceptualized as a location. Attributes (or properties) are like states, which are locations in the space of possibilities.

In both cases, trouble is being attributed to me, and in both cases, trouble is metaphorically conceptualized as being in the same place as me (co-location) – in one case, because I possess the trouble-object and in the other case, because I am in the trouble-location. That is, attribution in both cases is conceptualized

I'm in trouble. (Trouble is a location)
I have trouble. (Trouble is an object that is possessed)

We can see the duality somewhat more clearly with a word like "touche":

The noise gave me a headache. (Causation is giving - motion to)
The aspartin took away my headache. (Causation is taking - motion from)

My headache went away. (Change is loss - motion from)

I have a headache. (The headache is a possession)

In addition, the object in motion is conceptualized as a possession and the timing-changing as a possessor. Change is thus seen as the acquisition or loss of an object. Causation is seen as giving or taking. Here are some examples:

- In the location system, change is the motion of the thing-changing to a new location or from an old one.
- In the object system, the thing-changing doesn't necessarily move. Change instead the motion of an object to, or away from, the thing-changing.

The event structure system that we have seen so far is based wholly on location, But there is another event structure system that is the dual of the one we have just discussed — a system based on objects rather than locations. In both systems, CHANGE IS MOTION and CAUSES ARE FORCES that control motion. The difference is this:

In our discussion of time metaphors, we noted the existence of an object/location-dual, the opposite is true. The observer moves and times are fixed locations-the object-dual, the observer is fixed and times are moving objects. In the location-dual, the observer moves and times are fixed locations.

4.2. Duality in the event structure system

lower levels. Thus, the event structure metaphor is very widespread (and may even be universal), while the metaphors for life, love, and careers are much more restricted culturally.

Recess all that LOVE IS A JOURNEY IS AN EXTENSION OF A PURPOSEFUL LIFE IS A JOURNEY. It happens that LOVE IS A JOURNEY has a dual that is an extension of the
NEED. If a PURPOSEFUL LIFE IS A JOURNEY is a dual that is an extension of the
NEED, which is a PURPOSEFUL LIFE IS A JOURNEY, which is a PURPOSEFUL LIFE IS A BUSINESS.
The dual of LOVE IS A JOURNEY is LOVE IS A PARTNERSHIP, that is, a two-pe

A purposeful life is a burstiness He has a rich life. It's an enriching experience. I want to get a lot out of life. He's going about the busineses of everyday life. It's time to take stock of my life.

I will not try to survey all the dualities in the English metaphor system, but it is worth mentioning a few to see how subtle and persuasive dualities are. Take, for example, the life is a journey metaphor, in which goals in life are destinations, that is, desired locations to be reached. Since the dual of purposes are destin-
ations, purposes are desired objects. The dual of life is a journey is a metaphor in which life is an activity through which one acquires desired objects.
In this culture, the principal activity of this sort is business, and hence, life is a business is the dual of life is a journey.

TRYING TO ACHIEVE A PURPOSE IS AGRICULTURE
IT'S TIME I REAPED SOME REWARDS. THAT JOB IS A PLUM. THOSE ARE THE FRUITS OF
HIS LABOR. THE CONTRACT IS TYPE FOR THE PICKING.

TRYING TO ACHIEVE A PURPOSE IS FISHING
He's fishing for compliments. I landed a promotion. She netted a good job. I've got a line out on a good used car. It's time to fish or cut bait.

I'm shooting for a promotion. I'm aiming for a career in the movies. I'm afraid I missed my chance.

The typical way to hunt is to use projectiles (bullets, arrows, etc.)

Traditional methods of getting things to eat are hunting, fishing, and agriculture. Each of these special cases can be used metaphorically to conceptualize achieving (or attempting to achieve) a purpose.

ACHIEVING A POSITIVE OUTCOME SOMETHING TO FEAT
He savored the victory. All the good jobs have been gobbled up. He's hun-
gry for success. The opportunity has me drooling. This is a mouth-water-
ing opportunity.

Duality is a newly discovered phenomenon. The person who first discovered it in the event structure system was Jane Espenson, a graduate student at Berkeley who stumbled upon it in the course of her research on causation metaphors. Since Espenson's discovery, other extensive dualities have been found in the English language system. It is not known at present, however, just how extensive dualities are in English, or even whether they are all of the location/object type. Although hundreds of other mappings have been described to date, The major point to take away from this discussion is that metaphor resides for the most part in this huge, highly structured, fixed system, a system anything but "dead." Because it is conventional, it is used constantly and automatically, with neither effort nor awareness. Novel metaphor uses this system, and builds on it, but only rarely occurs independently of it. It is most interesting that this system of metaphor seems to give rise to abstract reasoning, which appears to be based on spatial reasoning.

businesses. Thus, we speak of lovers as “partners”, there are marriage contracts, and in a long-term love relationship the partners are expected to do their jobs and to share in both responsibilities (what they contribute to the relationship and benefits (what they get out of it). Long-term love relationships fail under the same conditions as businesses fail – when what the partners get out of the relationship is not worth what they put into it.

4.3. Invariance again

The metaphors I have discussed primarily map three kinds of image schemes: continuities, paths, and force-images. Because of the complexity of the subcases and interactions, the details are intricate, to say the least. However, the invariance principle does make claims in each case as to what image-schemes get mapped onto/target domains. I will not go through most of the details here, but so far as I can see, the claims made about inferential structure are reasonable ones.

For example, the logic of force-dynamics does seem to map, via the submaps-piling causes are forces, onto the logic of causation. The following are inferences from the logic of forces inherent in force dynamics:

- A stationary object will move only when force is applied to it; without force, it will not move.
- The application of force requires contact; thus, the applicer of the force must be in spatial continuity with the thing it moves.
- The application of force temporarily precedes motion, since inertia must be overcome before motion can take place.

Here, too, the words do not tell us that an individual's responses to an individual key on the keyboard. The words are prompts for us to perform a conceptual

(Rabbeleis *The Descriptions of King Lear*, trans. J. M. Cohen.)
His toes were like the keyboard of a spine.

This is a superimposition of the image of an hourglass onto the image of a woman's waist by virtue of their common shape. As before, the metaphor is conceptual; it is not in the words themselves, but in the mental images. Here, we have a mental image of an hourglass and of a woman, and we map the middle of the hourglass onto the waist of the woman. Note that the words do not tell us which part of the hourglass to map onto the waist, or even that only part of the hourglass shape corresponds to the waist. The words are prompts for us to map from one conventional image to another. Similarly, consider:

Here the image of the slow, sinuous walk of an Indian woman is mapped onto the image of the slow, sinuous, shimmering flow of a river. The shimmering of a school of fish is imagined as the shimmering of the belt.

Metaphoric images mappings work in the same way as all other metaphor mappings: by mapping the structure of one domain onto the structure of another. But here, the domains are conventional mental images. Take, for example, this line from Andre Breton:

Consider, for example, this poem from the Indian tradition:
one image onto one other image.
Now women-tivers
beleed with silver fish
move unburied as women in love
at dawn after a night with their lovers
(Merwin and Masson 1981: 71)

There are three kinds of metaphors that function to map one conventional mental image onto another. These contrast with the metaphors I have discussed so far, each of which maps one conceptual domain onto another, often with many concepts in the source domain mapped onto many corresponding concepts in the target domain. Image metaphors, by contrast, are "one-shots": they map only

5.1. Image metaphors

Chapter 6: Conceptual metaphor 215

Johmson and I argued in *Metaphors We Live By* (Lakoff and Johnson 1980) that a complex propositional structure could be mapped by metaphor onto another domain. The main example we gave was ARGUMENT IS WAR. Kóvecses and I, in our analysis of anger metaphors (Lakoff 1987; case study 1; Kóvecses 1990), also argued that metaphors could map complex propositional structures. The Invariance Principle does not deny this, but it puts those claims in a very different light. Complex propositional structures involve concepts like time, states, causes, purposes, quantity scales, and categories. If all these abstract changes, causes, purposes, quantities mapped by metaphor onto concepts like time, states, actions, causes, purposes, means, quantity, and categories.

- So-called propositional inferences arise from the inherent topological structure. In other words:

- I have taken the trouble to discuss these abstract concepts to demonstrate this consequence of the Invariance Principle: what have been seen in the past as proportional inferences are really image-based inferences. If the Invariance Principle is correct, it has a remarkable consequence:
- Abstract reasoning is a special case of image-based reasoning.
- Image-based reasoning is fundamental and abstract reasoning is image-based reasoning under metaphorical projections to abstract domains.
- To look for independent confirmation of the Invariance Principle, let us turn to image metaphors.

These are among the classic inferential conditions on causation: spatial contiguity, temporal precedence, and that A caused B only if B wouldn't have happened without A.

In studying a wide variety of poems about death in English, we found that, in poem after poem, death was personified in a relatively small number of ways: drivers, coachesmen, footmen; reapers, destroyers, or opponents in a struggle or game (say, a knight or a chess opponent). The question we asked was: why these? Why isn't death personified as a teacher or a carpenter or an ice cream salesman? Somehow, the ones that occur repeatedly seem appropriate. Why?

5.2.1. Personification

When Turner and I were writing *More Than Cool Reason*, we hypothesized that the existence of what we called "generic-level metaphors" to deal with two problems we faced — first, the problem of personification and second, the problem of proverbs, which requires an understanding of analogy. I shall discuss each in turn.

3.2. Generic-level metaphors

Tumner and I (Lakoff and Turner 1989) have suggested that the invariantence Prin-ciple could be an answer to both questions. We suggest that conventional mental images are structured by image-schemes and that image metaphors preserve image-schemes and that image metaphors preserve image-scheme structure. Invariantence Prin-ciple suggests that invariantes, paths onto parts and so on. The generalization would be that all metaphors are invariant with respect to their cognitive topology, that containers onto containers, paths onto paths, and so on. Each metaphorical mapping preserves image-scheme structure.

- How do they work? What constraints does the mapping impose? What kinds of internal structures do mental images have that permit some mappings to work readily, others only with effort, and others not at all? What is the general theory of metaphor that unifies image metaphors with all the conventional metaphors that map the propositional structure of one domain onto the propositional structure of another domain?

Image metaphors raise two major issues for the general theory of metaphor:

my horse whose tail is like a trailing black cloud.

whose body is an eagle-plumed arrow:

my horse whose legs are like quick lightening

With his helmet like a fine eagle plume;

My horse with a hoof like a striped agate,

Chap

The structure of a rainbow, its band of curved lines for example, is mapped onto an arc of curved hair, and many rainbows onto many such arcs on the horse's mane. Such image mapping allows us to map our evaluation of the source domain onto the target. We know that rainbows are beautiful, special, inspiring, larger than life, almost mystic, and that seeing them makes us happy and inspires us with awe. This knowledge is mapped onto what we know of the horse: it too is awe-inspiring, beautiful, larger than life, almost mystic. This line comes from a poem containing a series of such image mappings:

Watchman

(War God's Horse Song I, words by Tall Kira ahni, interpreted by Louis my horse with a mane made of short rainbows.

Such mappings of one image onto another can lead us to map knowledge about the first image onto knowledge about the second. Consider the following example from the Navaho:

Other attributes are also mapped: the color of the sand bank onto the color of flesh, the quality of light onto a wet sand bank onto the color of skin, the lighting of grazing onto the water's touch receding down the bank onto the reflectiveness of skin, the light grazing along the skin. Notice that the words do not tell us that any clotting is involved. We get that from a conventional mental image. Part-whole detail in the images limits mappings to highly specific cases. That is what bank just as the clotting covers the hidden part of the body. The proliferation of structure is also mapped in this example. The water covers the hidden part of the bank just as the clotting covers the hidden part of the body.

(Mefwim and Mission 1981: 69)

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BASILIO IN THE LOVE WOMAN

SAND DUNES

SLOWLY SLOWLY LIVES IN BOURGEOIS

1998-03-25 10:30:45

Image mapping can involve more than mapping physical part-whole relations—ships, for example, the water line of a river may drop slowly and that slowness is part of a dynamic image, which may be mapped onto the slow removal of clothes.

mapping between conventional mental images. In particular, we map aspects of the part-whole structure of one image onto aspects of the part-whole structure of another. Just as individual keys are parts of the whole keyboard, so individual

This specific knowledge schema about the blind man and the ditch is an instance of a general knowledge schema, in which specific information about the blindness and ditch are absent. Let us refer to it as the "generic-level schema" that structures our knowledge of the proverb. That generic level knowledge schema is:

- He blames the situation, rather than his own incapacity.
- He should have held himself responsible, not the situation.

Suppose a presidential candidate knows nothing about politics and some person A imposes a political belief on him. In this case, the president's knowledge of politics is destroyed by the press's reporting of the importance of politics. He blames the press for reporting it, rather than himself for committing it. We think he should have recognized the realities of political press coverage when he chose to commit the impurity. We express our judgment by saying, "Blind/blames the ditch."

Turner and I (1989) observed that the knowledge used in comprehending the case of the candidate's impurity shared certain things with knowledge structure used in comprehending the literal interpretation of "Blind/blames the ditch." That knowledge structure is the following:

To get some sense of the possible range of interpretations, consider the following application of the proveby:

Blind
blames the ditch

are natural; others seem impossible. Why? Consider the following example from *Astian Figures*, translated by William Merwin.

5.2.2. Proverbs

The preservation of generic-level structure explained why death is not meta-phorized in terms of teaching, or filling the bathtub, or sitting on the sofa. These actions do not have the same causal and overall event structure, they do not share „generic-level structure.“

Chapter 6: Conceptual metaphor 219

Kechnicizing Iuneric's observation about causation in PROGENEERATION, we mere-for hypothesized that EVENTS ARE ACTS ABOUT CAUSATION IS PROGENEERATION, where the action must have the same overall shape as the event. What is preserved across the mapping is the causal structure, the aspectual structure, and the per sistence of entities. We referred to this as "generic-level structure."

Thus, for example, we can speak of Saussure as the father of modern synchronic linguistics, or of New Orleans as giving birth to jazz. But we cannot use this metaphor for a single causal action with a short-lived effect. We could not speak of Josep Canseco as the father of the home run he just hit, or of that home run as giving birth to the Oakland A's victory in the game. We could, however, speak of Babe Ruth as the father of modern home-run hitting, and of home runs giving birth to the era of baseball players as superstars. The overall event shape of the target domain limits the applicability of the metaphor.

Turmer (1987) had noticed a similar case in *Death Is the Mother of Beauty*, his classic work on kinship metaphor. In expressions like *necessity is the mother of invention*, or *Edward Teller was the father of the H-bomb*, causation is understood in terms of giving birth or fathering, what Turmer called the causation is PROGRESSION metaphor. But, as he observed (Turmer 1987: 145-148), this metaphor could not be used for just any instance of causation. It could only be used for cases that had the overall event shape of progeneration; something must be created out of nothing, and the thing created must persist for a long time (as if it had a life).

Destroying and devouring are actions in which an entity ceases to exist. The same is true of death. The overall shape of the event of death is similar in respect to the overall shapes of the events of destroying and devouring. More over, there is a causal aspect to death: the passage of time will eventually result in death. Thus, the overall shape of the event of death has an entity that over time ceases to exist as the result of some cause. Devouring and destroying have the same overall event shape. That is, it is the same with respect to causal structure and the sequence of events.

actions by some agent (like a therapist). It is that agent that is personified. We thus hypothesized a very general metaphor, EVENTS ARE ACTIONS, which combines with other, independent, existing metaphors for life and death. Consider, for example, the DEATH IS DEPARTURE metaphor. Departure is an event. If we understand this event as an action on the part of some causal agent – someone who brings about this or helps to bring about, departure – then we can account for figures like drivers, coaches, footmen, and so forth. Take the PEOPLE ARE PLANTS metaphor. In the natural course of things, plants wither and die. If we see that event as a causal action on the part of some agent, that agent is a reaper. So far, so good. But why does it have to be a reaper? And what about the impossible cases?

All the proverbs that Turner and I studied turned out to involve this sort of generic-level schema, and the kinds of things that turned up in such schemata seemed to be pretty much the same in case after case. They include:

- Causal structure
- Temporal structure
- Event shape; that is, instantaneous or repeated, completed or open-ended, single or repeating, having fixed stages or not, preserving the existence of entities or not, and so on
- Purposive structure
- Modal structure
- Linear scales

This is a very general schema characterizing an open-ended category of situations. We can think of it as a variable template that can be filled in many ways. As it happened, Turner and I were studying this at the time of the Gary Hart scandal. Hart, a presidential candidate, committed certain sexual indiscretions during a campaign, had his candidacy dashed, and then blamed the press for his downfall. In short, if theivariance Principle is correct, the way to arrive at a generic-level schema for some knowledge structure is to extract its image-schematic structure. In other words, under theivariance Principle, an aspect of image-schematic structure on it is, under theivariance Principle, an aspect of knowledge structure.

The metaphorical interpretation of such discourse forms as proverbs, tables, allusions, and so on seems to depend on our ability to extract generic-level structure. Turner and I have called the relation between a specific knowledge structure and its generic-level structure the relation between a generic knowledge structure and common mechanism for comprehending the general in terms of the specific.

If theivariance Principle is correct, then theGENERIC is SPECIFIC metaphor nothing more. Should it turn out that generic-level structure is exactly image-schematic structure, then theivariance Principle would have enormous explanatory value. It would obviate the need for a separate characterization of generic-level structure. Instead, it would itself characterize generic-level structure, explaining possible personifications and the possible interpretations for proverbs.

The GENERIC IS SPECIFIC metaphor is used for more than just the interpretation of proverbs. Turner (1991) has suggested that it is also the general mechanism at work in analogic reasoning and that theivariance Principle characterizes the class of possible analogies. We can see how this works with the Gary Hart example cited above. We can convert that example into an analogy with the following sentence:

Gary Hart was like a blind man who fell into a ditch and blamed the ditch. The

This correspondence defines the metaphorical interpretation of the proverb as applying in the generic-level schema of the proverb. Moreover, the class of possible interpretations of the proverb, "Blind / blames ditch" does not mean "I took a bath or My aunt is sitting on the sofa or any of the myriad things the proverb cannot mean.

- There is a person with an incapacity.
- He blames the situation rather than his own incapacity.
- He blames the situation in which his incapacity results in a negative consequence.
- He encounters a situation in which his incapacity results in a negative consequence.
- There is a person with an incapacity.
- He blames him as being foolish for blaming the press instead of himself.
- If we view the generic-level schema as mediating between the proverb "Blind / blames the ditch" and the story of the candidate's impropriety, we get the following correspondence:
- The blind person corresponds to the presidential candidate.
- His blindness corresponds to his inability to understand the consequences of his personal improprieties.
- Falling into the ditch corresponds to his committing the impropriety and having it reported.
- Being in the ditch corresponds to being out of the running as a candidate.
- Blaming the blind man as foolish for blaming the ditch corresponds to judeging the ditch as foolish.
- Judgeing the ditch corresponds to blaming the press coverage.
- Blaming the ditch corresponds to fooling the press coverage.
- The myriad things the proverb cannot mean.

- (a general situation like "cointining"). Since Glucksberg is not in the business of tallying spacial notions to be metaphorically categorized in terms of a fundamental situation, I have argued in this essay that the general principle governing such an account, he does not see it as his job to give a descriptive theory of conceptual systems, he does not see it as his job to give a descriptive theory of the nature of conceptual systems, he does not see it as his job to give a descriptive theory of metaphors, he does not see it as his job to give a descriptive theory of metaphors-as-categories, he needs an account of metaphor. But given such an account of metaphor, the metaphor-as-categories theory becomes unnecessary.

Even worse for the Glucksberg-Kesyer theory, it cannot account for either everyday conceptual metaphor or for the sort we have been discussing or for really rich poetic metaphor, such as one finds in the works of, say, Dylan Thomas, or for image metaphor of the sort common in the works of, say, Navaho, and surrealist traditions. Since it does not even attempt to deal with most of the data covered by the contemporary theory of metaphor, it cannot account for "how metaphor works."

5.5. More on novel metaphor

At the same time most of the chapters in Orlony (1993 [1979]) were written (the late 1970s), "metaphor" was taken to mean "novel metaphor"; since the huge system of conventional metaphor had barely been noticed. The authors therefore never took up the question of how the system of conventional metaphor functions in the interpretation of novel metaphor. We have just seen one such example. Let us consider some others.

As common as novel metaphor is, its occurrence is rare by comparison with conventional metaphor, which occurs in most of the sentences we utter. Our everyday metaphor system, which we use to understand concepts as commonplace as time, state, change, causation, purpose, and so forth is constantly active, and is used maximally in interpreting novel metaphorical uses of language. The problem with all the older research on novel metaphor is that it completely missed the major contribution played by the conventional system.

As Turner and Lakoff (1989), there are three basic mechanisms for interpreting linguistic expressions as novel metaphors: extensions of conventional metaphors, generic-level metaphors, and image metaphors. Most interesting poetic metaphor uses all these superimposed on one another. Let us begin with examples of extensions of conventional metaphors. Dante begins

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- A knowledge schema for the blind man and the ditch
 - A knowledge schema confirming Gary Hart
 - The generic is specific metaphor

A good example of how the rest of the metaphor system interacts with GENERIC is the well-known example of Glucksberg and Keyser (1993), which illustrates the generic level of the metaphor (see Lakoff and Turner 1989; Chapter 4). In this example, the well-known schema for a jail includes the knowledge that a jail imposes extreme physical constraints on a prisoner's movements. The generic schema, factoring out the specific details of the prisoner and the jail, X imposes extreme physical constraints on Y's movements. But now two additional constraints apply to this generic-level schema: The event structure metaphor, with the submetaphor ACTIONS ARE SELF-PROPELLED MOVEMENTS, and psycho-logical force is physical force. These metaphors map "X imposes extreme physical constraints on Y's movements" into "X imposes extreme psychological force is physical force". The statement "my job is a jail" now two additional constraints on Y's movements. But now two additional constraints on Y's actions". The statement "my job is my job is a jail" imposes extreme psychological force on my actions. Thus, the metaphor implies that I impose extreme psychological force on my actions.

I mention this example because of the claim by Glucksberg and Keyser (1993) that metaphor is simply a matter of categorization. In personal correspondence, however, Glucksberg has written, "We assume that people can judge and can also infer that certain basic level entities, such as jails, typically or are emblematic of a metaphorical category such as situations that are containing, implying, etc." "Glucksberg and Keyser give no theory of how it is possible to have such a metaphorical category such as situations that are containing, implying, etc."

That metaphor is simply a matter of categorization, I infer that certain basic level entities, such as jails, typically or are emblematic of a metaphorical category such as situations that are containing, implying, etc." "Glucksberg and Keyser give no theory of how it is possible to have such a metaphorical category such as situations that are containing, implying, etc."

5.4. The Glucksberg-Keyser Claim

A good example of how the rest of the metaphor system interacts with GENERIC is the well-known example of Glucksberg and Keyser (1993), my job is a jail. First, the knowledge schema for a jail includes the knowledge that a jail imposes extreme physical constraints on a prisoner's movements. The GENERIC imposes extreme physical constraints on Y's movements. But now two additional metaphors apply to this generic-level schema: The event structure metaphor, with the submetaphor ACTIONS ARE SELF-PROPELLED MOVEMENTS, and PSYCHOLOGICAL FORCE IS PHYSICAL FORCE. These metaphors map "X imposes extreme physical constraints on Y's movements" into "X imposes extreme physical constraints on Y's actions". The statement "my job is a jail" imposes extreme psychological constraints on my actions." Thus, the mechanism for understanding my job is a jail uses very common, independently existing metaphors: GENERIC IS SPECIFIC, PSYCHOLOGICAL FORCE IS PHYSICAL FORCE, and the Event Structure Metaphor.

- As Turner and I discussed in detail (Lakoff and Turner 1989), there are three basic mechanisms for interpreting linguistic expressions as novel metaphors: extensions of conventional metaphors, generic-level metaphors, and image metaphors. Most interesting poetic metaphor uses all these superimposed on one another. Let us begin with examples of extensions of conventional metaphors. Dante begins

I mention this example because of the claim by Glucksberg and Keyser (1993) that metaphor is simply a matter of categorization. In personal correspondence, however, Glucksberg has written, "We assume that people can judge and infer that certain basic level entities, such as jails, typify or are emblematic of a metaphor category such as jails, situations that are containing, unpleasant, etc." Glucksberg and Keyser give no theory of how it is possible to have such a metaphorical attribution category like 'category' — that is, how it is possible for one kind of thing

The second example of Searle's I will consider is Sally is a block of ice. Here there is a conventional metaphor that AFFECTION is WARMTH, as in ordinary sentences like she's a warm person, he was cool to me, and so forth. A block of ice evokes the domain of temperature and, since it is predicated of a person, it also evokes knowledge of what a person can be. Jointly, both kinds of knowledge activate AFFECTION IS WARMTH. Since a block of ice is something very cold and not able to become effective quickly or easily, this knowledge is mapped onto Sally as being very warmed quickly or easily. Finally, Searle discusses the hours crept by as we waited for the plane. Here we have a verb of motion predicated of a time expression; the former activates the knowledge about motion through space and the latter activates the time domain. Jointly, they activate the TIME-AS-MOVING-OBJECT mapping. Again the meaning of the sentence follows only from everyday knowledge and the everyday system

This could be taken somewhat metaphorically, but it's most likely metaphorical interpretation is via the CAREER as a JOURNEY metaphor. This metaphor is evoked primarily by source domain knowledge about pole climbing. Part of the involves effortful, self-propelled, destination-oriented motion upward. Part of the involves effortful, self-propelled, estimation-oriented motion upward, and knowledge that the metapad pole, that the pole was difficult to climb, that she can get on that particular ward motion, that it is difficult for someone to stay at the top of a greasy pole, and that he will most likely slide down again. The CAREER is a JOURNEY metaphor maps this knowledge onto career, it probably involved some temporary loss of status along the way, it will be difficult to maintain this position, and he will probably lose status before long. All this follows with nothing more than the conventional CAREER-as-JOURNEY mapping, which we all share as part of our metaphorical systems, plus knowledge about climbing greasy poles.

I will not pursue discussion of other more complex poetic examples, since they require lengthy treatment which can be found in Lakoff and Turner (1989), Turner (1987), and Turner (1991). Instead, I will confine myself to discussing three examples from John Seare (1993). Consider first Disraeli's remark, "I have climbed

5.6. Searle's theory

Two roads diverge in a wood, and I -
Took the one less traveled by,
And that has made all the difference.

"Life's road" evokes the domain of life and the domain of travel, and hence the conventional life is a journey metaphor that links them, "[I] found myself in a dark wood" evokes the knowledge that if it's dark you cannot see which way to go. This evokes the domain of seeing, and thus the conventional metaphor that KNOWING IS SEEING, as in I see what you're getting at, this claimis aren't clear, the passage is opaque, and so forth. This entails that the speaker doesn't know which way to go. Since the life is a JOURNEY metaphor specificities doesn't know without direction in his life. All this uses nothing but the system of conventional metaphor, ordinary knowledge structure evoked by the conventional meaning of sentence, and inference based on that knowledge structure.

Another equally simple case of the use of the conventional system is Robert Frost's

In the middle of life's road
I found myself in a dark wood.

Consider objects like thermometers and stock market graphs, where increases in temperature and prices create a correlation between more and up markets easier to read and these are objects created by humans to accord with the more is up metaphor.

5.1. Realizations of metaphor

complete^y natural. But what about the experiential basis of a purposeful life is a journey? Recall that the mapping is in an inheritance hierarchy, where life goals are special cases of purposes, which are desimations in the event structure metaphor. Thus, a purposeful life is a journey inherits the experiential basis of purposes are destinations. Thus, inheritance hierarchies provide *indirect experiential bases*, in that a metaphorical mapping lower in a hierarchy can inherit its experiential basis indirectly from a mapping higher in the hierarchy.

Consider still another case. Why, in the Event Structure Metaphor, is achieving a purpose understood as reaching a destination (in the location subsystem) and as acquiring a desired object (in the object subsystem)? The answer again seems to be corresponsences in everyday experience. To achieve most of our everyday purposes, we either have to move to some destination or acquire some object. If you want a drink of water, you've got to go to the water fountain. If you want to be in the sunshine, you have to move to where the sunshine is. And if you want to write down a note, you have to get a pen or pencil. The correspondences between achieving purposes and either reaching destinations or acquiring objects is so utterly common in our everyday existence, that the resulting metaphor is

Consider another case. What is the basis of the widespread knowing is seeing metaphor, as in expressions like I see what you're saying; his answer was clear; this paragraph is murky; he was so blinded by ambition that he never noticed his limitations? The experimental basis in this case is the fact that most of what we know comes through vision, and in the overwhelming majority of cases, if we

in real experience between quantity and verticality, but understanding quantity in terms of verticality makes sense because of a regular correspondence in so cases, which go beyond real experience: *in prices rose there is no correspondence*

6. The experimental basis of metaphor

When we spell out the details of all such “perceived connections,” they turn out to be the system of conceptual metaphors I have been describing. But given that system, Seatre’s theory and his principles become unnecessary.

In addition, Seatre’s account of literal meaning makes most of the usual false assumptions that accompany that term. Seatre assumes that all everyday, common-vernacular language is literal and not metaphorical. He would thus rule out every example of conventional metaphor described not only in this chapter, but in the whole literature of the field.

The study of the metaphorical subsystem of our conceptual system is a central part of synchronic linguistics because much of our semantic system, that is, our system of concepts, is metaphorical, as we saw above. Because this huge system went unnoticed prior to 1980, authors like Seatre, Sadock, and Morgan could claim, incorrectly as it turns out, that metaphor was outside of synchronic linguistics and in the domain of principles of language use.

The unconscious mind makes use of our unconscious system of communication - phobia, sometimes to express psychological states in terms of physical symptoms. For example, in the event structure metaphor, there is a subsuming difficulties are impediments to motion which has, as a special case, difficulties are burdens. It is fairly common for someone encountering difficulties to walk with his shoulders stooped, as if carrying a heavy weight that is burdening him.

6.1.6. Physical symptoms

In the event structure metaphor, there is a submapping EXTERNAL EVENTS ARE LARGE MOVING OBJECTS that can exert a force on you and thereby affect whether you achieve your goals. In English the special cases of such objects are "things," fluids, and horses. Pamela Morgan (in unpublished work) has observed that in Greek mythology, Poseidon is the god of the sea, earthquakes, horses, and bulls. The list might seem arbitrary, but Morgan observes that these are all large moving objects that can exert a force on you. Posedion, she surmises, should really be seen as the god of external events.

6.1.5. Myths

growing after them. The whited ears devour the good ears. Joseph interprets the two dreams as a single dream. The seven fat cows and full ears are good years and the seven lean cows and withered ears are famine years that follow the good years. The famine years devour what the good years produce. This interpretation makes sense to us because of a collection of conceptual metaphors in our conception system – metaphors that have been with us since biblical times. The first metaphor is TIMES ARE MOVING ENTITIES. A river is a common metaphor for the flow of time; the cows are individual entities (years) emerging from the flow into the scene. The second metaphor is ACTIVATING A PURPOSE IS EATING, where being fat indicates success, being lean indicates failure. This metaphor is common with the most common of metaphors, meat and grain eaten, each single cow stands for all the cows raised in a year and each ear of corn for all the corn grown in a year. The final metaphor is RESOURCES ARE FOOD, where using up resources is eating food. The devouring of the good years by the famine years is interpreted as indicating that all the surplus resources of the good years will be used up by the famine years. The interpretation of the whole dream is thus a composition of three conventional metaphors and one metonymy. The metaphoric and metonymic sources are combined to form the reality of the dream.

Chapter 6: Conceptual metaphor 229

Conceputual metaphors constitute the vocabulary of dream interpretation. The collection of our everyday conceptual metaphors makes dreams interpretation possible. Consider one of the most celebrated of all examples, Joseph's interpretation of Pharaoh's dream from Genesis. In Pharaoh's dream, he is standing on the river bank when seven fat cows come out of the river, followed by seven lean cows that eat the seven fat ones and still remain lean. Pharaoh dreams again. This time he sees seven "full and good" ears of corn growing and then seven withered ears

6.1.4. Dream interpretation

Consider the cultural ritual in which a newborn baby is carried upstream to ensure his or her success. The metaphor reallized in this ritual is that if you climb the ladder of success, you'll rise in the world.

6.1.3. Rituals

It is common for the plot of a novel to be a realization of the purposeful life journey. *Pilgrim's Progress* is a classic example.

6.1.2. Literary works

Conventional metaphors are real in cartoons. A common example is the realization of the ANGER IS A HOT FLUID IN A CONTAINER metaphor, in which one can be boiling mad or letting off steam. In cartoons, anger is commonly depicted by steam coming out of the character's ears. Social clumsiness is indicated by having a cartoon character fall on his face.

6.1.1. Cartoons

There are a great many ways in which conventional metaphors can be made real. They can be realized in obvious imaginative products such as cartoons, literary works, dreams, visions, and myths, but they can be made real in less obvious ways as well, in physical symptoms, social institutions, social practices, laws, and even foreign policy and forms of discourse and history.

Let us consider some examples.

Such objects are ways in which metaphors impose a structure on real life, selected as down and decreases as up. Understood than if they contradicted the metaphor, it, say, increases were represented through the creation of new correspondences in experience. And once created in one generation, they serve as an experiential basis for that metaphor in the next.

Chapter 6: Conceptual metathor 231

6.1.11. Forms of discourse

Common metaphors are often made of academic discourses forms: the heroic quest, the heroic battle, and the heroic adventure. The guided tour is based on the metaphor that thought is motion, where ideas are located and one reason leads to another. This essay is an example of such a guided tour of some intellectual terrain. This essay is taken as objectively real. The discursive form of the heroic battle is based on the metaphor that argument is war. The author's theory is the hero, the opposing theory is the villain, and words are weapons. The battle is in the form of an argument defending the hero's position and demolishing that of the villain. The heroic quest discursive form is based on the metaphor that knowledge is a valuable but elusive object that can be discovered if one perseveres. The scientist is the hero on a quest for knowledge. What is discovered or in the discourse of an individual is structured and made sense of via discourse, and so forth. These examples reveal that much of what is real in a metaphorical or graphical experience like a dream, an action like a ritual, a form of comprehension, or even natural. What is real differs in each case: an object like a thermometer, or a real national metaphor, and thereby made comprehendible, or even natural. What is real is structured by conventional metaphors, and thereby made comprehensible.

What makes all these cases real is that in each case something real is experienced by conventional metaphors. And thereby made comprehensible both correlations of metaphors are two sides of the same coin: they are both correlations of metaphors in metaphrases, whereas the correlations in metaphors. The difference is that the experiential bases precede, ground, and make sense of conventional metaphysical mapings, whereas the correlations in metaphrases follow, and are made sense of via the conventional bases of the metaphorical structures.

Experiencing both correlations of metaphors are two sides of the same coin: they are both correlations of metaphors in metaphrases, whereas the correlations in metaphrases follow, and are made sense of via the conventional bases of the metaphorical structures.

6.1.7. Social institutions

There is a conceptual metaphor that SEEING IS TOUCHING, where the eyes are like limbs and vision is achieved when the object seen is "touched". Examples are: my eyes picked out every detail of the pattern; he ran his eyes over the walls; he couldn't take his eyes off of her; their eyes met; his eyes glued to the TV. The metaphor is made real in the social practice of avoiding eye "contact" on the street, and in the social prohibition against "undressing someone with your eyes." Laws are PERSONS is a tenet of American law, which not only enables corporations to harm others or assign responsibility so they can be sued when liable, but also gives them certain First Amendment rights.

6.1.9. Laws

A STATE IS A PERSON is one of the major metaphors underlying foreign policy concepts. Thus, there are friendly states, hostile states, and so forth. Health for a state is economic health and strength is military strength. A threat to economic health can be seen as a death threat, as when Iraq was seen to have a strange life-style of the United States. Strong states are seen as male and weak states as female, so that an attack by a strong state on a weak one can be seen as a rape, as in the rape of Kuwait by Iraq. A just war is conceptualized as a fairy tale with villain, victim, and hero, where the villain attacks the victim and the hero rescues the victim. Thus, the United States and allies in the Gulf War were portrayed as having rescued Kuwait. As President Bush said in his address to Congress, "The issues couldn't have been clearer: Iraq was the villain and Kuwait, the victim."

6.1.10. Foreign policy

6.1.8. Social practices

We have to budget my time; this will save you time; I've invested a lot of time in that; he doesn't use his time profitably. This metaphor came into English use about the time of the industrial revolution, when people started to be paid for work by the amount of time they put in. Thus, the factory led to the institutional pricing of periods of time with amounts of money, which formed the experimental basis of this metaphor. Since then, the metaphor has been realized in many other ways. The budgeting of time has spread throughout American culture.

6.1.10. Foreign policy

LAW IS A MAJOR AREA WHERE METAPHROR IS MADE REAL. FOR EXAMPLE, CORPORATIONS ARE PERSONS IS A TENET OF AMERICAN LAW, WHICH NOT ONLY ENABLES CORPORATIONS TO BE HARMED OR ASSIGNED RESPONSIBILITY SO THEY CAN BE SUED WHEN LIABLE, BUT ALSO GIVES THEM CERTAIN FIRST AMENDMENT RIGHTS.

6.1.9. Laws

There is a conceptual metaphor that SEEING IS TOUCHING, where the eyes are limbs and vision is achieved when the object seen is "touched". Examples are: my eyes picked out every detail of the pattern; he ran his eyes over the walls; he couldn't take his eyes off her; their eyes met; his eyes are glued to the TV. The metaphor is made real in the social practice of avoiding eye "contact" on the street, and in the social prohibition against "undressing someone with your eyes."

7. Summary of results

As we have seen, the contemporary theory of metaphor is revolutionary in many respects. To give you some idea of how revolutionary, here is a list of the basic essentials that differ from most previous accounts.

address to Congress, "The

Photocell reading as output. This runs counter to cases where there are multiple overlapping metaphors in a single sentence, and which require the simultaneous activation of a number of metaphorical mappings.

The contemporary theory of metaphor is thus not only interesting for its own sake. It is especially interesting for the challenge it presents to other disciplines. If the results of the contemporary theory are accepted, the defining assumptions of whole disciplines are brought into question.

Note

* This research was supported in part by grants from the Sloan Foundation and the National Science Foundation (NS-8703202) to the University of California at Berkeley.

The following colleagues and students helped with this essay in a variety of ways, from useful comments to allowing me to cite their research: Ken Baldwin, Claudia Brugmann, Jane Bspensson, Sharon Fischer, Ray Gibbs, Adele Goldberg, Mark Johnson, Karin Myhra, Bve Sweester, and Mark Turner.

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Image schema
Chapter 7

The cognitive psychological reality of image schemas and their transformations

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