A BROAD VIEW OF COGNITIVE LINGUISTICS*

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Abstract

Cognitive linguistics can offer an account not only of linguistic structure but also of a wide variety of social and cultural phenomena. The comprehensive account presented in this paper is crucially based and dependent on cognitive capacities that human understanders and producers of language possess quite independently of their ability to use language. By discussing the cognitive processes and the various linguistic, social and cultural issues they help us describe and explain, the author demonstrates that cognitive linguistics is far more than a theory of language; one can think of it as a theory of "meaning-making" in general in its innumerable linguistic, social and cultural facets.

1. Introduction

In this paper, I will show that cognitive linguistics can not only offer an account of linguistic structure but also that of a wide variety of social and cultural phenomena. In other words, I will suggest that cognitive linguistics is a much more comprehensive enterprise than it is commonly taken to be by many — both inside and outside the field. Furthermore, I will claim that the comprehensive account to be presented is crucially based and dependent on cognitive capacities that human understanders and producers of language possess independently of their ability to use language.

In particular, I will discuss cognitive capacities in relation to the following linguistic, social and cultural phenomena:

(1)   Categorization: the nature of concepts and debates concerning art

Knowledge organization: frame semantics and cultural issues

Metonymic thought: metonymy in language and social thought

Metaphoric thought: metaphor in mind, language, and politics

Image-schemas: understanding literature

Figure-ground alignment: grammatical structure

Mental spaces: semantic anomaly

Conceptual integration: creativity in linguistic and conceptual structure, as well as in everyday activities

By discussing the cognitive processes and the various linguistic, social and cultural issues, I want to highlight the wide scope of cognitive linguistics. By providing a discussion of such a wide variety of linguistic, social and cultural topics in terms of cognitive linguistics, I wish to demonstrate that cognitive linguistics is far more than a theory of language; we can perhaps think of it as a theory of "meaning-making" in general in its innumerable linguistic, social and cultural facets, of which the above topics are just a handful of examples.

But if cognitive linguistics is indeed such a comprehensive theory of meaning-making in general, why do we call it "cognitive **linguistics**"? And in addition to the problem that the scope of cognitive linguistics is arguably much broader than language, we have another problem as regards the naming of the enterprise; namely, that the term "cognitive" seems tautological in relation to issues of meaning. Meaning-making as such can only be cognitive. For these two reasons, I believe that the term 'cognitive linguistics' is indeed a misnomer and that it should be replaced by another term. At the end of the paper, I will propose some candidate names for the field.

All in all, then, the general goal of the paper is theoretical rather than descriptive. Although I will describe several specific case studies taken either from my own work or that of others, my main intention is to show the wide scope of cognitive linguistics and the possibilities that this view can offer in the study of the general meaning-making capacity of human beings. (Consequently, the references made in the paper are not intended to offer a complete bibliography of the field.)

2. Categorization: the nature of concepts and debates concerning art

Human meaning-making depends in part on how we categorize entities and events in the world; that is, on the nature of conceptual categories,

or concepts, we have concerning these entities and events. The classical view of categories is based on the idea of essential features. In order to have a conceptual category, the members of the category must share certain essential features. On this view, categories are defined by essential features, or, in more modern terminology, by necessary and sufficient conditions (Fillmore 1975). Based on empirical work in cognitive psychology (see, e.g., Rosch 1978), a number of authors began to criticize the classical view of categorization. Fillmore (1975), Lakoff (1987), Taylor (1989), and others raised serious objections concerning the validity of such an approach to categories and offered a radically new alternative, which became known as "prototype categorization." In a way, the theory of prototype categorization became the cornerstone of cognitive linguistics. In the new rival view, categories are defined not in terms of necessary and sufficient conditions, but with respect to prototypes and various family resemblance relations to these prototypes.

Philosopher of language John Austin extended the notion of categories to the senses of words (see Lakoff 1987). That is to say, Austin thought of the various senses of a word as a category of senses that is organized around a prototypical sense. He showed by way of analyzing the different senses of words that one of the senses is central, while others are non-central, or peripheral. As we know well today, it is very common for words to have a central prototypical sense with the other senses deriving from that sense either through metonymy or metaphor.

The notion of prototype was extended to "linguistic categories" by cognitive linguists; that is, to the terms we use to describe language. Linguistic categories include *noun*, *verb*, *modifier*, *phrase*, *clause*, *sentence*, etc. The same question that can be raised in connection with everyday categories can also be raised in connection with grammatical categories: Are they defined by a set of essential properties or by certain prototypes? Recent work in this area suggests that it makes sense to think of these categories as prototype-based as well (Lakoff 1987; Taylor 2003).

It seems reasonable to believe then that the notion of prototype-based organization in categories applies to three distinct levels or areas:

(2) Categories for everyday concepts

Categories for senses of words

Categories for linguistic concepts

Work in cognitive linguistics and psychology has indeed shown that in all three of these areas the categories we possess have an internal structure

that is organized around prototypes (see, e.g., Gibbs et al. 1995; Taylor 1989; 2003).

What does all of this have to do with real-world issues in culture and society? We can suggest that there is a close connection between the nature of our categories and many important cultural and social issues. More specifically, it seems reasonable to claim that the emergence, existence, and often the resolution of cultural and social issues arises from the nature of our categories. Simply put, the nature of our categories (i.e., whether they are based on essential features or prototypes) does seem to play a role in the cultural and social issues involving these categories.

As one such case, let us take the everyday concept of art and see whether it is defined according to the classical view or the prototype view. As a matter of fact, this is not the most important reason why we analyze the concept here; as can be expected, the concept of art cannot be defined by essential features. More importantly, the discussion of the structure of the concept of art can shed light on why art has been a debated category probably ever since its inception and particularly in the past two hundred years.

Kövecses (in preparation) examines some of the history of the category of art in the past two hundred years on the basis of the *Encyclopedia Britannica* (2003). What he finds in this history is that the category undergoes constant redefinition in the 19th and 20th centuries. Diverse and rival conceptions of art challenge the "traditional" view — that is, the most prevalent "conservative" view. Impressionism, cubism, surrealism, pop art, and the like, are reactions to the traditional view and to each other. But what is the traditional view of art?

The traditional conception of art can be arrived at by examining those features of art that are challenged, negated, or successfully canceled by the various movements of art such as the ones mentioned above. (3) is a summary of the assumed features of the traditional view and the art movements that cancel them.

(3)   A work of art:

   Represents objective reality (canceled by impressionism, expressionism, surrealism);

   Should evoke objective and rational thoughts (canceled by symbolism, surrealism);

   Is representational, i.e., it consists of natural figures and forms (canceled by symbolism, cubism, abstract art);

   Is made by means of certain canonical activities (canceled by constructivism);

   Uses certain canonical techniques (canceled by impressionism);

   Uses canonical materials (canceled by constructivism);

Uses canonical themes (canceled by constructivism, social realism, pop art);

Uses objects that are elevated, that belong to "high" culture (canceled by pop art);

Is for the elite of society (canceled by pop art);

Is for display (canceled by conceptual art);

Is a physical object (canceled by conceptual art).

As can be seen, even those features of art that many would take to be definitional for all forms of art (such as the one that art represents objective reality, the one that it is representational, and the one that it is some kind of physical object) can be explicitly negated and effectively canceled. That is, it is not simply the case that someone at some point challenged a feature of the definition, but that the challenge was actually successful to the degree that a new art movement was born out of the successful new definition.

Given the analysis of what these art movements challenge, negate, or cancel on the basis of the *Encyclopedia Britannica*, certain features of the traditional view of art emerge:

– First, according to the traditional view, art imitates, represents, or models, objective reality. It is also an aspect of this view that the more faithful the resemblance is, the better the work of art.

– Second, a work of art should evoke objective and rational thoughts. These come from the representations of objective reality.

– Third, a work of art is representational in the sense that it mirrors reality by representations (e.g., painted objects and events) that the audience can recognize and understand (e.g., the object represented is a man, a tree, a dog). In other words, the figures and forms of a work of art are natural figures and forms.

– Fourth, a work of art is such that certain canonical activities, techniques, and materials are used that lead to a final product — the work of art. For example, a painter *paints* a painting using certain materials and techniques, and a sculptor *sculpts* a sculpture using different materials and techniques.

– Fifth, works of art are **about** something; they have a theme. In the traditional view, the theme is often something elevated, such as death, freedom, love.

– Sixth, the themes typically belong to "high" culture, not "low" culture. In addition, the audience of works of art is generally the elite of society.

– Seventh, a work of art is typically for display or exhibition or sale in certain designated places, such as museums, galleries, auctions, concert halls, etc.

– Eighth, a work of art is a physical object—an object that can be seen, touched, read, or heard.

Based on these features, we could say that we have to do with art:

(4)   when someone models reality by means of certain natural representations of it by making use of certain activities, materials, techniques, and when the resulting physical product is about something important for especially those who are educated enough to understand it and who can experience the physical product in certain designated places.

In a way, this sounds like a plausible definition of the traditional view of art. We could conservatively claim that this is what "real" art is— all the other forms of art being extensions from it. We can think of the definition as providing a prototype of art for many people.

But the main point of the previous sketchy survey of art history is that there are always people who do not accept this definition. They can constantly challenge, undermine, or plainly negate every one of these features. In other words, the features given are not essential ones for art. If they were essential, they could not be so easily challenged and canceled. Without them, the category of art should collapse. But it does not seem to collapse; instead, it has been around for centuries. It thrives as newer and newer definitions are given for it. In sum, we can suggest that for many people the concept of art has a central member— the traditional conception—and many non-central ones. The non-central ones may become the prototypes of art for some people, and then these new prototypes can be further challenged.

We do not have space to present more of the analysis here, but it should be clear by now that the category of art is what philosophers of language call an "essentially contested concept". Such concepts assume a prototype-based organization, and it is their very structure that invites contestation. The nature of the widespread phenomenon of cultural and social debates can only be understood if we study and understand the nature of our categories that give rise to the phenomenon by virtue of their very structure.

3. Knowledge organization:
frame semantics and cultural issues

Much of our knowledge about the world comes from the categories we have. Categories are mentally represented as frames, schemas, or models (see, e.g., Schank–Abelson 1977; Fillmore 1982; Langacker 1987; Lakoff 1987). The terminology is varied (see Andor 1985), but the idea behind it is roughly the same. We can use the following working definition of frames: A frame is a structured mental representation of a coherent organization of human experience. Perhaps the best known slogan for this idea is Fillmore's paradigm-setting statement: "Meanings are relativized to scenes [i.e., frames]." Additional characteristics of frames include that in most cases they are not defined by necessary and sufficient features and that they often consist of several entities related to particular actions or events. An early attempt to look at meaning in language in this light is Fillmore's case grammar, which he later developed into his "frame semantics".

However, these ideas become important in the study of almost any facet of life—and not just language. We are trying to make sense of the world even when we are not consciously aware of this, and the world as we experience it is always the product of some prior categorization and framing by ourselves and others. As a matter of fact, it is now a well established fact in cognitive linguistics and psychology that different individuals can interpret the "same" reality in different ways. This is the idea that became known in cognitive linguistics as "alternative construal" (see, e.g., Langacker 1987).

Below I present two brief case studies to show that the notion of frame, or schema, or model takes us way beyond issues in grammar or language in general. (The case studies are discussed in more detail in Kövecses, in preparation.) I worked out the first example on the basis of Eve Sweetser's lecture notes to her "Language and Mind" course and used it in my own course when I taught the same course at UC Berkeley. Here is the basic issue: How do we categorize the various objects and events we encounter in the world? Clearly, most of our categories are based on similarity (especially family resemblance) among members of a category. That is, many categories are held together by family resemblances among the items that belong to a particular category. In this sense, most of our conventional categories for objects and events are similarity-based ones. For example, the things that one can buy in a store are commonly

categorized based on their similarity to each other; thus, we find various kinds of nails (short and long ones, thick and thin ones, etc.) in the same section of a hardware store. They form a similarity-based category. However, we can also find nails in other sections of the store. Some nails can occur in sections where, for example, things for hanging pictures are displayed. Clearly, a nail is not similar to any of the possible things (such as picture frames, rings, short strings, adhesive tapes, maybe even a special hammer) displayed in this section. How is it possible that certain nails appear in this section? Or, to put it in our terms, how is it possible that nails are put in the same category with these other things? The answer is that in addition to similarity-based categories, we also have "frame-based" ones. That is to say, categories can be formed on the basis of which things go commonly and repeatedly together in our experience. If we put up pictures on the wall by first driving a nail into the wall and then hanging the picture frame on the nail by means of attaching a metal ring or a string on the frame, then all the things that we use for this purpose may be placed in a single category. But this category will be **frame-based** — not **similarity-based**.

As my second example, consider a case that I read about in the *San Francisco Chronicle* in the spring of 2003. The example has to do with how framing plays a crucial role in seemingly straightforward matters, such as who should be considered one's mother in particular real-life situations. Let us take the story of a Hungarian-born couple living in the San Francisco Bay Area in California, whose story was reported in the *San Francisco Chronicle* (May 10, 2003). A 56-year-old woman, called Ilona, married a man called Istvan. This was her second marriage. She had two adult daughters from the previous marriage. They decided to have a child of their own, but their only option was for Ilona to conceive through in vitro fertilization by having viable eggs implanted in her uterus. The egg donor was Ilona's older daughter, Cecilia, aged 28. Nine months after the successful fertilization, Ilona gave birth to a healthy baby called Monica. The *San Francisco Chronicle* writes:

(5)   In the giddy aftermath of the birth, by cesarean section, Istvan looked at his wife cradling the newborn swathed in blankets, smiled at his stepdaughter looking on from afar, and asked the question that many still pose: "What is she, a mother or grandmother?"

How come he wasn't sure? We have a situation here in which an adult man whose wife just gave birth to a child using his genetic materials does

not know whether his wife is a mother! How can this be? In light of the present section, we can suspect what the answer is. The complex frame of motherhood contains five submodels (Lakoff 1987). The prototypical mother is the woman who gives birth to the child; who nurtures the child; who provides the genetic materials; who is the father's wife; and who is one generation older than the child. The doubt can arise for Istvan because Ilona did not provide the genetic materials of the child; it was provided by her own daughter, Cecilia. This shows that the lack of one feature characterizing prototypical mothers can be sufficient grounds for questioning motherhood.

But there are further puzzles that emerge from the situation. How does Cecilia think of Monica? What is the relationship between Ilona's adult daughter, Cecilia, and her new infant daughter, Monica? That this is not simply theoretical speculation can be gathered from the same article:

(6)   One look at Monica, and Cecilia's maternal feelings surfaced. She said she didn't expect such a reaction. Throughout the pregnancy, Cecilia referred to Monica as her sister. Afterward, she started feeling as if Monica were her daughter.

Cecilia has real maternal feelings, although in many ways she is not the mother; she did not give birth to the child, she is not nurturing the baby, and she is not the father's wife. Is she entitled to such feelings? She can reasonably argue that she provided part of the baby's genes, and so she is a mother. Would she also say that the baby has two mothers? We do not know, but it would not be an unreasonable idea either.

Moreover, to complicate the situation further, Cecilia is expecting a new baby of her own. The birth of the baby will pose a question concerning the relationship between Cecilia's new baby and Ilona: Will Ilona become a grandmother for the first time or the second time? This will depend on whether we categorize Monica as Ilona's or Cecilia's child.

Finally, what will be the relationship between Cecilia's new baby and Ilona's baby, Monica? Will they be sisters, or will Monica be the aunt of Cecilia's new baby? Again, this depends on whether we take Cecilia to be Monica's mother or not.

As this example shows, categorization and framing can have other than a referential function and significance. How we categorize and frame entities may determine how we feel and, conversely, the feelings we have toward entities may influence the way we categorize them. All of this is possible because we have a flexible conceptual system, which can give

rise to a number of different ways of conceptualizing the "same" situation. Categorization and framing are ways of thinking about the world, some of our most important "construal operations". With their help, we make sense of the world, but, as the example indicates, at times they can also make this understanding difficult and puzzling.

4. Metonymic thought:
metonymy in language and social thought

Cognitive linguists do not think of metonymy as a superfluous linguistic device whose only function is to avoid literalism and to make the expression of meaning more varied. Kövecses and Radden (1998) offer the definition of metonymy as follows:

(7)   Metonymy is a cognitive process in which a conceptual element, or entity (thing, event, property), the vehicle, provides mental access to another conceptual entity (thing, event, property), the target, within the same frame, or idealized cognitive model (ICM).

Thus, for example, given the RESTAURANT frame, or idealized model, the speaker of the sentence "The **ham sandwich** spilled beer all over himself" directs attention, or provides mental access, to the conceptual element PERSON EATING THE HAM SANDWICH (target) through the use of another conceptual element HAM SANDWICH (vehicle) that belongs to the same frame. (There has been an upsurge in the cognitive linguistic study of metonymy in recent years; for extensive collections of papers, see Panther–Radden 1999; Barcelona 2000; Dirven–Pörings 2002; Panther–Thornburg 2003. For research concentrated on metonymy, see, among others, Brdar–Brdar-Szabó 2003; Brdar-Szabó–Brdar 2003; Ruiz de Mendoza Ibanez 2000.)

As we mentioned previously, our knowledge of the world comes in the form of structured frames, schemas, or ICMs. These can be construed as wholes with parts. Since frames are conceptualized as wholes that have parts, there are two general configurations of wholes and parts that give rise to metonymy-producing relationships: the "whole and its parts" configuration and the "part and part" configuration. A variety of specific metonymy-producing relationships can be observed within both configurations (for details, see Kövecses–Radden 1998; Radden–Kövecses 1999).

We can think of categories themselves as having a part-whole structure. One example of this is the CATEGORY-AND-PROPERTY ICM. In

the case of categories, the most important part is the properties used to define the category. The category as a whole has properties as parts. In the sentence in (8), the first "boys" indicates the category of boys as a whole, while the second indicates the typical qualities, or features, of boys, such as 'being unruly' (i.e., we have the metonymy CATEGORY FOR PROPERTY).

(8)   Boys will be boys.

That is to say, a quality, or property, of boys ('being unruly') is made reference to by the second use of "boys" that captures the category as a whole. Incidentally, this analysis shows that sentences like *Boys will be boys* do not represent empty tautologies, as would be the case in many other approaches to meaning.

The reverse can also occur in the case of the category-and-property frame. A property can stand for the entire category. Consider a sentence like (9).

(9)   African-Americans were once called blacks.

Here we have the metonymy PROPERTY FOR THE CATEGORY. As a matter of fact, the metonymy applies twice in the sentence—both *African-Americans* and *blacks* are instances of it. Euphemisms (as well as disphemisms) are often based on this specific type of metonymy. As the example shows, the conceptual structure of the euphemism is the same in both cases (i.e., PROPERTY FOR THE CATEGORY). What changes are the connotations that go together with the particular property that replaces the old one (*African-American* does not, as yet, have the negative connotations of *black*).

Another kind of metonymy involves a category and a member of the category. This works within the CATEGORY-AND-MEMBER ICM. The category itself is viewed as a whole, while the members are the parts. The relationship between the whole category and a member is often reversible, as can be seen in the examples to follow:

(10) (a)   She's on the pill. (CATEGORY FOR A MEMBER)

(b)   Do you have an aspirin? (A MEMBER FOR THE CATEGORY)

In (10a), the whole category of pills stands for a particular member of the category, namely, contraceptive pills, whereas in (10b) a particular

member of a category (i.e., aspirin) stands for the entire category of pain-relievers.

This type of metonymy plays an important role in accounting for not only certain linguistic phenomena but also for various aspects of human thought, such as which members of categories lead to prototype effects (i.e., the effect that some members of categories are judged to be better examples of a category than others), how we reason about the world, why we have the social expectations we do, and the like. The survey below is based on Lakoff's (1987) work.

First, consider again the category of mother. We noted that the prototype of mother is a woman who gave birth to you, who nurtures you, who provided your genetic materials, who is your father's wife, and who is one generation older than you are. In other words, when the basic models converge in a particular case to form a complex model for mother, we have a very good example of mother. Here the prototype effect is produced by the convergence of the basic models. But let us assume that we have a large number of such mothers where the basic models are all present and let us assume that some of these mothers have a job and go out to work, while some others do not have a job, they are housewives. If we ask a large number of people whether those mothers are better examples of the category that go out to work or those who are housewives, the likely answer is going to be: the housewives. Why is this the case?

The answer is that stereotypical members tend to be looked at as better examples of a category than less or non-stereotypical members. The housewife mother is one such stereotype. Thus, we have an additional source of prototype effects. Among all the members of the mother category that are characterized by the five basic models, some category members are better examples than others: this is the housewife mother stereotype. This stereotype is defined in relation to one of the basic models that characterize the category: the nurturance model. Furthermore, this is an unnamed category member. There is no conventional name for housewife mothers; Lakoff simply used *housewife mother* to be able to talk about this particular category member, but it is not a conventional way of referring to such mothers. However, the contrastive category member of mothers who go out to work does have a conventional name: *working mother*. Working mother is defined in contrast to the housewife mother stereotype. It is usually the case that more prototypical members of a category do not have special, distinctive names,

whereas category members that are considered less prototypical do. This is what happens in the case of housewife mother and *working mother.*

In addition to being additional sources of prototype effects, stereotypes also define many of our social expectations. This is why under normal circumstances we are more likely to use sentences such as *She's a mother, but she is not a housewife* than *She's a mother, but she is a housewife.* The conjunction *but* is used to cancel our expectations concerning what we expect mothers to be like. The same applies to many other categories, such as husband, bachelor, mother-in-law, Italians, Jews, East Europeans, and so forth. Thus the analysis of metonymy may be an important diagnostic tool in discovering our social prejudices.

Second, if a category has some very commonly occurring members, these can acquire special status in that they can produce prototype effects. For example, in the case of the category of birds, such typical members include robins, sparrows, swallows, etc. in North America. That is to say, typical members can stand for the category as a whole. Moreover, typical members play an interesting role in reasoning. In one experiment, people were told that there is an island where there are some typical birds (like robins and sparrows) and some non-typical ones (like ducks). The subjects were asked: If the robins and sparrows have a disease, would the ducks get it? The answer was yes. They were also asked: If the ducks have a disease, would the robins and sparrows get it? The answer was no. In other words, there was an asymmetry in making inferences based on prototypical and non-prototypical members. This is metonymy-based reasoning.

Third, ideal members within a category also have a special status. It is a common phenomenon that when we think of some category, we have in mind an ideal member of that category. When we think about who we want to marry, we have ideal husbands and wives in mind; when we are teenagers, we want to have a special kind of love: ideal love; when we are planning to buy a car, we often think (or daydream) about an ideal car; and so on. That is to say, categories such as husband, wife, love, car, job, have ideal members and they can stand for the entire category. And as the examples show, we also use them to set goals. The ideal members of categories can often dictate how we act in the world and what emotions we have as a result of these actions.

Fourth, a single individual member of a category can also stand for the whole category. This happens in the case of paragons. A paragon is an individual that is an ideal. For example, in the US the paragon

of baseball players is still Babe Ruth or Joe DiMaggio for many people. Paragons also play an important cognitive role: We often imitate them and have a great deal of interest in them. Let it suffice to mention just a few additional examples of paragons like Diana, Prince Charles, and Madonna. It is this interest in paragons that the business world often capitalizes on. Paragons can thus have a pervasive social effect and can be capitalized on for business purposes.

Fifth, and finally, categories often have "salient members". Salient members commonly stand out among category members by virtue of a particular property that they have. They can also determine how we think about other category members. If a particular type of airplane crashes (let us say a DC-10), people will avoid this type of airplane for a while as their means of travel, no matter how safe DC-10s in general are. In other words, salient members of a category are routinely used in thought: We generalize from salient examples to other examples of the category. Needles to say, this can also result in a variety of social and economic effects.

In conclusion, metonymic thought pervades the way we think about the social and cultural world. In addition, it can have a variety of social, cultural and economic effects, and can influence what we take to be the real world. In other words, the importance and effect of the cognitive process of metonymy extends way beyond language and seems to be at the core of how we act in our social and cultural worlds.

5. Metaphoric thought:
metaphor in language, mind, and politics

Beginning with Lakoff and Johnson's (1980) seminal book, *Metaphors we live by*, cognitive linguistics opened up a new front in the study of language and the mind. This is perhaps the best known chapter in the history of cognitive linguistics (for an overview, see Kövecses 2002). In essence, the theory maintains that metaphor is a cognitive process in which one domain of experience (A) is understood in terms of another domain of experience (B). Metaphor consists of a source (B) and target domain (A) such that the source is a more physical and the target a more abstract kind of domain. Examples of source and target domains include the following: Source domains: WARMTH, BUILDING, WAR, JOURNEY; target domains: AFFECTION, THEORY, ARGUMENT, LIFE. Thus we get

conceptual metaphors: AFFECTION IS WARMTH; THEORIES ARE BUILD-
INGS; ARGUMENT IS WAR, LIFE IS A JOURNEY. What this means is that
the concepts of AFFECTION, THEORY, ARGUMENT, and LIFE are com-
prehended via the concepts of WARMTH, BUILDING, WAR, and JOURNEY,
respectively.

Why do particular target concepts go together with particular source
concepts? The traditional answer to this question is that there is some
kind of similarity between the two concepts; that is, concept A is similar
to concept B in some respect. While cognitive linguists accept this kind
of motivation for certain metaphors, they also take into account another
kind of motivation for many other metaphors. The choice of a particular
source to go with a particular target can also be motivated by some
embodied experience.

Consider as an example the metaphor AFFECTION IS WARMTH. We
can suggest that we find this metaphor natural because the feeling of
affection correlates with bodily warmth. We experience such embodied
correlation very early on in life. To be hugged and to be close to our
first caretaker produces this kind of warmth that gives us comfort and
eventually the feeling of affection. This example shows that the correla-
tion between the experience of affection and that of warmth need not be
conscious. As a matter of fact, it is characteristic of such embodied expe-
riences that they are not conscious most of the time. We experience such
correlations in bodily experience pre-conceptually and pre-linguistically.

As another example, consider heat. Heat and warmth are of course
related, in that they are both descriptions of temperature, but as far as
bodily motivation for metaphor is concerned, they are quite different.
That is to say, they motivate very different conceptual metaphors. Imag-
ine the following situation. You are working hard, let us say sawing or
chopping wood, or you are doing some vigorous exercise, like running or
aerobics. After a while you're beginning to work up heat, you will feel
hot, and maybe begin to sweat. We can say that the vigorous bodily
activity produces an increase in body heat. Typically, when you engage
in vigorous bodily activity, your body will respond in this way. Similarly,
when you are very angry, or when you have strong sexual feelings, or
when you are under strong psychological pressure, your body may also
produce an increase in body heat that manifests itself physiologically in
a variety of ways. In all of these cases, the increase in the intensity of an
activity or state goes together with an increase in body heat, and your
body responds this way automatically. The correlation between the in-

crease in the intensity of the activity or the state, on the one hand, and
the production of body heat, on the other, is inevitable for the kinds of
bodies that we have. We can't help undergoing the correlation between
intensity (of these activities and states) and body heat. This correlation
forms the basis of a linguistic and conceptual metaphor: INTENSITY IS
HEAT. But the correlation is at the level of the body, and it is in this sense
that metaphor is just as much in the body as it is in language or thought.

Since INTENSITY is an aspect of many concepts, the source domain
of heat will apply to many concepts, such as ANGER, LOVE, LUST, WORK,
ARGUMENT, etc. In general, we suggest that many conceptual metaphors
(i.e., source and target pairings) are motivated by such bodily correlations
in experience.

As was mentioned, in the traditional view of metaphor similarity is
the main motivation for bringing together two concepts in a metaphori-
cal relationship. One frequently mentioned example in the literature to
justify the view that metaphors are based on similarity is: "Achilles was
a lion." It is proposed that Achilles and lions share a property, namely,
that of being brave. This similarity gives rise to the metaphor.

Let us look at some other examples where the basis of metaphor can
be claimed to be some kind of similarity. Take a passage from the *San
Francisco Chronicle* analyzed by Kövecses (in preparation):

(11) Last fall, in a radio interview with a San Diego radio station and later on CNN's
Larry King Live, [singer Harry] Belafonte likened Secretary of State Colin Powell
to a plantation hand who moves into the master's house, in this case the White
House, and only supports policies that will please his master, President Bush.

In (11), one of the things that Belafonte knows about Powell is that Powell
is an African-American. Since slaves were also African-Americans, it is
easy for Belafonte to set up the metaphor, or more exactly, metaphorical
analogy. We can assume that this feature shared by Powell and the slaves
helps trigger the particular analogy. In other words, a feature (being an
African-American) that is shared by an element of the target (in this case,
Powell) and an element of the source (the slaves) help the speaker arrive
at an extensive set of analogical relationships between source and target.

But in many other cases the shared element is not such an obvious
feature. Often, the target and the source are characterized by similar
structural relations—without any shared features of the communicative
situation that might trigger the recognition of the shared relations (such
as in the case above) (see, e.g., Gentner 1983; Holyoak–Thagard 1996;

Glucksberg–Keysar 1993). For example, we can find shared generic-level structure in such domains as HUMAN LIFETIME and the LIFE-CYCLE OF PLANTS. This structure would include, for instance, something like: "living organisms have a period of their existence when they are most active" (whatever this means either for people or for plants) and "living organisms decline after this period". This case is of course a highly conventional metaphor: THE HUMAN LIFETIME IS THE LIFE-CYCLE OF A PLANT. But the same kind of analogy accounts for any number of similar metaphors. Take, for instance, the metaphor used by Harry Belafonte. We would not need any explicit triggers to say of an especially servile secretary of state or minister that he or she is a slave, thus evoking the GOVERNMENT IS A PLANTATION metaphor in which the president or prime minister is the master and the secretaries of state or ministers are the slaves. This is because we have the ability to recognize shared generic-level structure such as "inferiors are servile to superiors in order to please them" in distinct domains.

In summary, we can think of embodiment and similarity as different kinds of constraint on the creation of metaphor. Embodiment seems to be a stronger kind of constraint, in that it works automatically and unconsciously.

The idea that metaphors can be motivated by correlations in bodily experience has given rise to a "neural theory of metaphor". It is the brain that runs the body, and if metaphor is in the body it must also be in the brain. Embodied experience results in certain neural connections between areas of the brain (these areas corresponding to source and target). For example, it may be suggested that when the area of the brain corresponding to affection is activated, the area corresponding to warmth is also activated. The assumption in recent neuroscientific studies (see, for example, Gallese–Lakoff 2003) is that when we understand abstract concepts metaphorically, two groups of neurons in the brain are activated at the same time; when one group of neurons fires (the source), another group of neurons fires as well (the target). We can then assume that, for example, neurons corresponding to intensity and heat, respectively, are activated together in the brain when we think about the abstract concept of intensity in connection with certain events, activities, and states. Similarly, when we think about abstract amounts, such as prices, the neurons corresponding to amount and those corresponding to verticality (up–down) are co-activated in the brain. These co-activations of groups of neurons yield what are known as primary con-

ceptual metaphors INTENSITY IS HEAT and MORE IS UP (LESS IS DOWN). (On "primary metaphors", see Grady 1997.)

In which parts of the brain are the two domains located? According to this paradigm of research, the source domain is located in the sensory-motor system, whereas the target domain is found in higher cortical areas. This idea is the neuroscience version of the notion of the embodiment of metaphor, which states that source domains typically come from more concrete and physical sensory-motor experience, while target domains are less physical in nature.

American discourse about morality often involves two foundational conceptual metaphors (Lakoff 1996): (i) MORALITY IS STRENGTH (cf. (12)) and (ii) MORALITY IS NURTURANCE (cf. (13)). (This section is based on Kövecses 2002; in preparation.)

(12) BEING GOOD IS BEING UPRIGHT

   BEING BAD IS BEING LOW

   DOING EVIL IS FALLING

   EVIL IS A FORCE

   MORALITY IS STRENGTH

According to this metaphorical system of morality, evil can act on an **upright** person who can either **fall** (become bad) or remain upright (remain good). The evil can be either an external or an internal force. External evil may be a dangerous situation that causes fear. Internal evil may be, for example, the seven deadly sins. In either case, a moral person would apply a counterforce in an effort to overcome the force of evil and would be successful in overcoming it. Thus, in this view, moral "strength" is based on the notion of physical strength.

(13) THE COMMUNITY IS A FAMILY

   MORAL AGENTS ARE NURTURING PARENTS

   PEOPLE NEEDING HELP ARE CHILDREN NEEDING NURTURANCE

   MORAL ACTION IS NURTURANCE

In this second set of metaphors, morality appears to be more of an "other-directed" issue than a "self-directed" one. Whereas in the "strength" metaphor there is only a single moral agent, in the nurturance version there are two—people who need help and people who have a responsibility to provide that help. As Lakoff (1996) notes, it is not the case that

the two metaphors exclude each other in the actual practice of morality in everyday life. They are used together on most occasions, but different people may give different priorities to them. For some people, morality is primarily defined in terms of the MORALITY IS STRENGTH metaphor, whereas for others it is defined mostly in terms of MORALITY IS NURTURANCE.

In Lakoff's (1996) account, the different priorities that people give to the two metaphors explain two conceptions of American politics — conservatism and liberalism. If one considers the MORALITY IS STRENGTH metaphor as more important, this person is likely to be attracted to conservative ideas and ideals in politics. On the other hand, if someone considers the "nurturance" metaphor more important as regards morality, this person is more likely to be a liberal as far as political issues are concerned. Why? The link between one's moral and political views is provided by a metaphor for the concept of nation mentioned above: A NATION or SOCIETY IS A FAMILY. Society is conventionally viewed as a family with the state as a parent and citizens as children. The two views of morality that were briefly outlined above imply different conceptions of what a family is (Lakoff 1996). In the "moral strength" metaphor, the family consists of independent and self-reliant individuals and morality is taught and learned primarily through discipline (to resist evil). Lakoff characterizes this view of the family in an interview as follows (*UCBerkeley News*, October 27, 2003):

(14) The conservative worldview, the strict father model, assumes that the world is dangerous and difficult and that children are born bad and must be made good. The strict father is the moral authority who supports and defends the family, tells his wife what to do, and teaches his kids right from wrong. The only way to do that is through painful discipline—physical punishment that by adulthood will become internal discipline. The good people are the disciplined people. Once grown, the self-reliant, disciplined children are on their own. Those children who remain dependent (who were spoiled, overly willful, or recalcitrant) should be forced to undergo further discipline or be cut free with no support to face the discipline of the outside world.

By contrast, in the "nurturance" metaphor the family consists of people who have a moral obligation to help each other to begin with. In this view of the family, morality is taught and learned less through discipline than through nurturance. Again in Lakoff's words (*UCBerkeley News*, October 27, 2003):

(15) ... the progressive worldview is modeled on a nurturant parent family. Briefly, it assumes that the world is basically good and can be made better and that one must work toward that. Children are born good; parents can make them better. Nurturing involves empathy, and the responsibility to take care of oneself and others for whom we are responsible. On a larger scale, specific policies follow, such as governmental protection in form of a social safety net and government regulation, universal education (to ensure competence, fairness), civil liberties and equal treatment (fairness and freedom), accountability (derived from trust), public service (from responsibility), open government (from open communication), and the promotion of an economy that benefits all and functions to promote these values, which are traditional progressive values in American politics.

Now the priorities given to the two metaphors will have implications for one's political views because the two conceptions of the family and morality will influence one's view of the nation as a family. The metaphor-based notion of morality will have different consequences for one's political views. Morality and politics will fuse into **moral politics**; hence the title of Lakoff's book: *Moral politics.*

This analysis of metaphor in American politics shows very clearly that metaphor is at the heart of society and culture. To think of metaphor as merely a linguistic device is to ignore its pervasive role in what we take to be core cultural and social phenomena.

6. Image-schemas: understanding literature

Much of our knowledge is not propositional but image-schematic. Johnson defines image schemas in the following way: An image schema is "a recurring, dynamic pattern of our perceptual interactions and motor programs that gives coherence to our experience" (Johnson 1987, xix). Image schemas function as the foundation of thought. To demonstrate what image schemas are, how they emerge, and how they perform their function in structuring thought, let us consider some examples.

First, let us take the CONTAINER image schema (Lakoff 1987). The bodily experiences that motivate the existence of this schema are varied, but they can be reduced to two general types of experience. On the one hand, we have bodies that are containers (of body organs, fluids, etc.). On the other hand, not only are our bodies containers, but we function as container-objects in other larger objects. Thus, these larger objects, like buildings, rooms, contain us. The CONTAINER image schema has the following structural elements: INTERIOR, BOUNDARY, and EXTERIOR. The basic logic of the schema can be given as follows: Everything is either

inside the container or outside it. Moreover, if B is in A, and C is in B, then one can conclude that C is in A. Thus the CONTAINER schema imposes a certain logic on us. There are many metaphors that are based on the CONTAINER schema. For example, STATES ARE CONTAINERS, PERSONAL RELATIONSHIPS ARE CONTAINERS, and THE VISUAL FIELD IS A CONTAINER. This is why we can be **in** trouble, we are **in** love, and things come **into** view.

Second, let us look at the SOURCE–PATH–GOAL schema (Lakoff 1987). The bodily experience that motivates the schema is the most common (and unconscious) type of experience: Whenever we move, we move **from** a place **to** another place **along** a sequence of continuous locations. The structural elements include SOURCE, PATH, GOAL (DESTINATION), and DIRECTION. The basic logic is hardly noticeable: If you go from A to B, then you must pass through each intermediate point connecting A and B. Again, several metaphors are based on this image schema. Take the complex metaphor of LIFE IS A JOURNEY, which assumes the SOURCE–PATH–GOAL schema. A mapping (and a submetaphor) of this complex metaphor is PURPOSES ARE DESTINATIONS, in which we also have a SOURCE, a PATH, and a GOAL. As a matter of fact, it is this second primary metaphor that provides some of the motivation for the more complex one. Complex events are also commonly viewed as involving an initial state — SOURCE, intermediate stages — PATHS, and a final state — GOAL.

Third, consider now the image schema of FORCE, as studied extensively by Talmy (1988; 2000). A large portion of our utterances about the world can be accounted for by making reference to such notions as agonist, antagonist, force tendency of agonist, etc. Kövecses (2000) applies this conceptual machinery to the study of the folk theory of the mind; in particular to such components of the mind as emotion, morality, and rational thought. Based on the study of the language we use to talk about the mind, he suggests that all three components can be described in force dynamic terms. In other words, the workings of the mind can be seen as interactions of forces. The rational "self–agonist" undergoes change in emotion, the rational "self–agonist" withstands change in morality, and the rational "self–antagonist" causes change in thought. What is of any interest in such a description? After all, everyone knows that emotion is different from morality and that rational thought is different from both. But this is not the point. What is remarkable about the analysis in terms of force dynamics is that it shows that the basic cognitive "architecture"

of emotion, morality, and rational thought is so much alike. They are all constituted force dynamically, and this shows that "superficially" very different domains, or faculties, of the folk theory of the mind have a deep underlying similarity on which the many obvious differences are based.

It is an interesting feature of thought that we can conceptualize domains and situations by means of not just one but several image schemas. For example, force dynamic image schemas can interact with perceptual image schemas: We can have a FORCE inside a CONTAINER. Forces inside containers are fairly common as metaphorical ways of conceptualizing the mind. It was shown by Kövecses (1990) that this was a major metaphor used by Sigmund Freud in his psychoanalytic theory.

It is quite remarkable that we can find something similar in the case of the image schematic understanding of stories. That stories and discourse in general are commonly understood by means of image schemas was noticed in the cognitive linguistic literature, for example, by Palmer (1996). Much subsequent work also relies on this general idea (see, for example, Kimmel 2001).

As a demonstration of the role of image schemas in understanding and remembering a plot, Michael Kimmel uses Joseph Conrad's novel *Heart of Darkness.* Kimmel describes the gist of the story as follows:

(16) In the novel, Marlow, a seaman and wanderer, recounts a steamboat expedition into deep African territory in search of the enigmatic Mr. Kurtz who is the company's agent at the 'Inner Station', a trading outpost. The story is situated around the turn from the 19th to the 20th century in the Congo, which was at that time a private property of the Belgian King Léopold and marked by rampant forced labor and vicious exploitation of the natives. The narrative's thrust goes quite literally towards Kurtz who is the goal of the gradual penetration into a strange, dangerous and unfathomable territory. Kurtz has imposed a surreal order of terror and charisma among the natives. He is a man of captivating and demonic force who has signed a Faustian pact and is being worshipped as a god, yet troubled. When Marlow finds him, he is on the verge of madness and death and experiencing great inner turmoil. Marlow himself is changed in the struggle to comprehend his experience with this once exceptional and now tormented man who has looked into his own nature, the dark side of his passions. Having succumbed to alien and yet strangely familiar forces in the zone of proximity between culturalized humanity and an archaic 'Other', Kurtz dies with the words "The horror! The horror!" on his lips. Back from his experience Marlow visits Kurtz's fiancée in Brussels, but conceals the truth about his fall from grace and his last words from her. It is apparent that while the tale's overall structure is that of a literal journey, metaphorically it is a journey to the limits of the human soul, a double-entendre that becomes evident in the very title.

Kimmel suggests that "the most fundamental macrostructural function of image schemas is the creation by readers of a condensed representation for use in plot recall." That is to say, as we read the text, we try to construct a network of image schemas that are based on the description of the literal journey, the various force metaphors used, and the many symbolic meanings that transpire from the novel. Kimmel proposes a diagrammatic representation of our global understanding of the text as in Fig. 1.
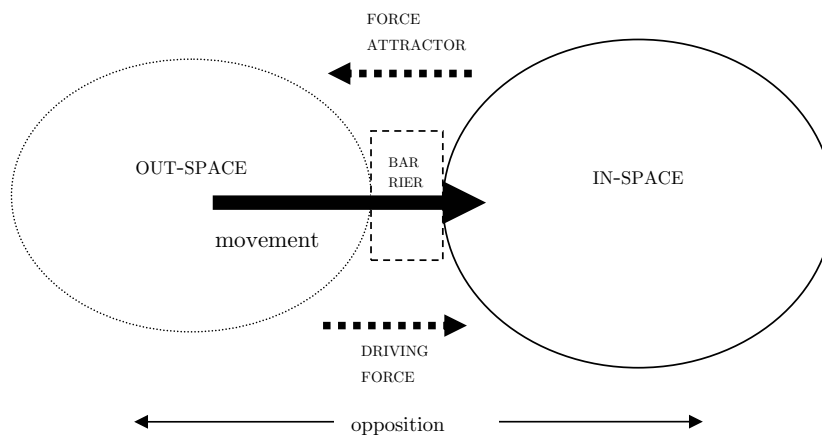

Fig. 1

The line with an arrow image-schematically represents the literal journey into Africa. The circles image-schematically represent Europe and Africa, respectively. Europe is an "out-space" and Africa is an "in-space". Superimposed on the image schemas of container and source–path–goal, we find a force-dynamic schema represented by opposing bold arrows. Marlow is both metaphorically driven and attracted by certain forces: the forces of intellectual curiosity and knowledge, on the one hand, and the forces of sensuality and passion, on the other.

    We cannot present Kimmel's intricate system here. The main point of this brief demonstration was twofold: One is to show that image schemas may have an important function in remembering and comprehending story plots. The second is to indicate that image schemas may be superimposed on each other and may thus form complex structures that we use to make sense of complex sets of events.

7. Figure–ground alignment: grammatical structure

Figure–ground relations have been studied mostly by cognitive psychologists. What is called "figure–ground alignment" here is important if we want to account for how we talk about spatial relations in language. Language about spatial relations is pervasive in communication. We talk about how one entity is positioned with respect to another entity, how an entity moves in relation to another entity, and so on. For example, when we say that "The bus is coming", we have a figure, the bus, that is presented by the sentence as moving in relation to the ground, the speaker. The cognitive linguist who studied this area of the interface between language and cognition extensively was Leonard Talmy (see Talmy 2000).

To begin with, we should first note that figure–ground alignment is an asymmetrical relation. Let us assume that we have *bike* as figure and *house* as ground in the sentences below. Whereas one can naturally say (17a), it is much less natural to say (17b):

(17) (a)   The bike is near the house.

      (b) ??The house is near the bike.

This is because the figure should come first in the sentence, followed by the ground. The reversal of figure–ground alignment in the second sentence makes the sentence sound odd.

The same applies to the following pair of sentences:

(18) (a) The fly is on the ceiling.   (figure–ground)

      (b) *The ceiling is above the fly.   (ground–figure)

Why are the *bike* and the *fly* the figure and the *house* and the *ceiling* the ground? Talmy (2000, 315–6) characterizes figure and ground in the following way:

(19) *Figure:*   *Ground:*

      smaller   larger
      more mobile   more stationary
      structurally simpler   structurally more complex
      more salient   more backgrounded
      more recently in awareness   earlier on scene/in memory
      location less known   location more known

These characteristics do not all have to be present in particular cases and we often decide on what the figure and ground will be on the basis of just one or two situationally important features. In the examples above, it is clear that the bike and the flea are smaller and more mobile than the house and the ceiling, respectively. This makes them good figures in the given context. In other contexts, however, they may become grounds.

The two examples we have seen so far involve static relations between two entities (bike-near-house and flea-on-ceiling). However, as our characterization of spatial relations above suggests, spatial relations also involve motion events, in which one entity moves in relation to another. This is exemplified by (20):

(20) She went into the house.

In this case, we have a motion event, where *she* is the figure and *house* is the ground. The figure (*she*) moves in relation to the ground (*house*).

In addition to its application to static and dynamic spatial relations, figure–ground alignment can be seen at work in grammatical structure as well. Complex sentences can be construed in terms of figure–ground alignment; the main clause corresponds to the figure, while the subordinate clause to the ground. Let us take the following sentences from Croft–Cruse (2004, 57):

(21) (a) I read while she sewed.

     (b) I read and she sewed.

The main clause *I read* is the figure and the subordinate clause *while she sewed* is the ground. The relation between the two events is construed asymmetrically in the first sentence, but symmetrically in the second. This means that the reading event is viewed as occurring against the background of the sewing event. However, given the second sentence, no such relation is construed between the two events, which are seen as occurring independently of each other. This latter construal results in a coordinated syntactic construction (the two clauses connected by *and*).

In other cases, the two events can only be construed as an asymmetrical figure–ground relation. Since dreaming is contingent on sleeping but sleeping is not contingent on dreaming (Talmy 2000, 325), we can have (22a) but not (22b):

(22) (a) He dreamed while he slept.

   (b) *He slept while he dreamed.

Moreover, the two events cannot be conceived as being coextensive and coordinated, either. Thus the sentence in (23) sounds odd.

(23) $^{*/?}$He dreamed and he slept

This is because the two events are inherently causally related (dreaming being contingent on sleeping), and thus a non-causal conceptualization (i.e., as symmetrical figure and ground) is not possible in a natural way.

8. Mental spaces: semantic anomaly

The theory of mental spaces is a key idea in cognitive linguistic approaches to the understanding of how people make sense of utterances in the course of on-line communication. To get an idea of what mental spaces are, consider as an example the so-called "picture noun" context, as made explicit by the second sentence below (Fauconnier 1997):

(24) (a) The girl with blue eyes has green eyes.

   (b) In the picture, the girl with blue eyes has green eyes.

There are two mental spaces here: the mental space of reality, as we represent it to ourselves and the mental space of the picture, as we perceive it. The mental space of reality is the base space and the mental space of the picture is a "model" space (or picture space). To understand the sentence, the mappings go from the base space to the picture space. If we represent the girl as x, the eyes as y, and the blue color of the eyes as z, the mappings are as follows:

(25) Base: $\rightarrow$ Picture:

   girl $(x) \rightarrow$ girl (x')
   eyes $(y) \rightarrow$ eyes (y')

However, the blue color (z) of x's eyes does not correspond to the green color of x''s eyes. In other words:

(26) blue (z) $\nrightarrow$ green (z')

This says that the blue color of the girl's eyes in the base space does not correspond to the green color of the girl's eyes in the picture space. But it is precisely what the sentence states: that the girl who has blue eyes has green eyes in the picture. Thus we get a contradiction. How can we explain it by means of mental space theory?

We can account for the apparent contradiction if we assume that there are two mental spaces here: a base space and a picture space. In the base space, we have the girl with blue eyes, and in the picture space we have the girl with green eyes. The girl with blue eyes in the base space can be said to have green eyes in the picture space because we can refer to a counterpart of an element by means of the description of that element in another space (i.e., in the base space where the description is *the girl with blue eyes*) (Fauconnier 1997). This provides an elegant solution to a problem that would be difficult to handle for formal theories of language.

9. Conceptual integration: creativity in linguistic and conceptual structure and in everyday activities

To see what conceptual integration, or blending, involves, we can take an example from a well known metaphor ANGER IS A HOT FLUID IN A CONTAINER (see Kövecses 1986; 1990; Lakoff–Kövecses 1987; Lakoff 1987). This metaphor is constituted by the mappings "container → body", "hot fluid → anger", "degrees of heat → degrees of intensity", etc. However, there is more going on than just having straightforward mappings from source to target in one of the examples of this metaphor:

(27) God, he was so mad I could see the smoke coming out of his ears.

The example was reanalyzed by Fauconnier and Turner (2002), who point out that in this case an element of the source is blended with an element of the target. There are no ears in the source and there is no smoke in the target, but in the blend both are present at the same time as *smoke coming out of his ears.* A frame is created with smoke and ears in it that is novel with respect to both the source frame and the target frame.

What happens here is that an angry person's head with the ears becomes the container in the source, and the smoke (steam) in the source will be seen as coming out of the ears (and not through the orifices of

the container). This is a true conceptual fusion of certain elements of both source and target in the blend. The blend goes beyond simply instantiating existing frame roles in the source with participants in the target frame, as is often the case with single-scope integration networks (Fauconnier–Turner 2002).

Given the new emergent structure, the blend can be developed further. One can say, for example:

(28) God, was he ever mad. I could see the smoke coming out of his ears—I thought his hat would catch fire!

To understand this sentence, we need the "smoke coming out of one's ears" frame, plus knowledge based on how intensity is conceptualized in the network (see Kövecses, in preparation). A submapping of the ANGER IS HEAT metaphor is INTENSITY OF EMOTION IS DEGREE OF HEAT. One of the entailments of this metaphor is that a high degree of heat may cause fire (corresponding to "intense anger may cause a dangerous social situation"). But how does "hat" get into the blend? The fact that it does shows the almost infinite creativity of blends: we can develop them further and further, bringing about new conceptualizations that depend on old ones, as well as the application of systematic cognitive processes. In this particular case, the "hat" emerges as we run the previous blend with the "smoke coming out of one's ears". The head-container with the ears metonymically evokes the hat, which is typically worn on the head. Due to the entailment of the INTENSITY IS HEAT metaphor ("high degree of heat may cause fire"), the hat can be seen as catching fire. This would indicate an overall increase in the intensity in the person's anger. We can represent all this diagrammatically as in Fig. 2 (taken from Kövecses, in preparation).

Although this example may sound like a highly creative blend, Fauconnier and Turner emphasize that blending just as commonly involves conventionalized cases and can go into the heart of grammar (to use a theory-dependent metaphor).

As another example of conceptual integration, let us now take what is known as the "caused motion" construction, analyzed in detail by Goldberg (1995) in a cognitive linguistic framework. A general characterization of the caused motion construction can be given along the following lines. Semantically, the construction can be described in the following way: An agent does something, and as a result an object moves. As a prototypical example of this situation, we can take the sentence in (29):
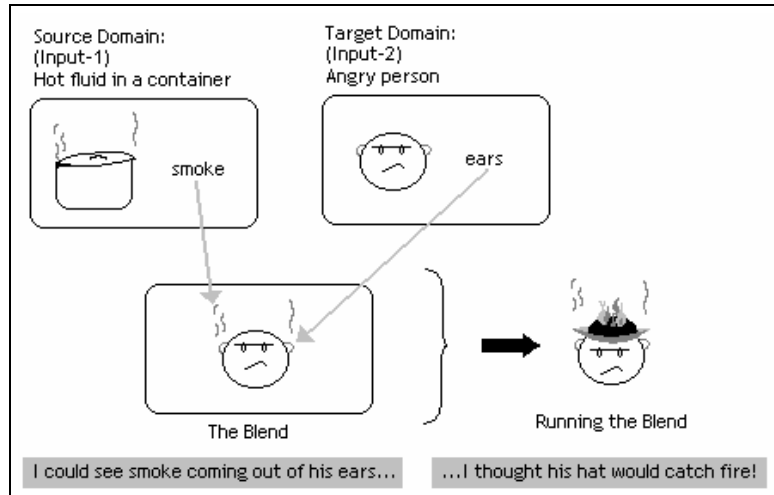
Fig. 2

(29) Jack threw the ball over the fence.

In this sentence, Jack is the agent that throws the ball (does something), and the action causes (produces a result) the ball to move over the fence (the object moves).

The form of the sentence can be given as NP–V–NP–PP, where *Jack* is the first NP, *throw* is the V, *the ball* is the second NP, and *over the fence* is the PP (prepositional phrase).

It is clear that in the prototypical case the verb must be a transitive verb, such as *throw, kick, toss, push, fling, flip*, and many others. This is the characterization of the prototype of the construction. But there are many other cases, including:

(30) (a) She sneezed the napkin off the table.

(b) I walked him to the door.

(c) I'll talk you through the procedure.

(d) They teased him out of his senses.

(e) I read him to sleep.

(f) They let Bill into the room.

(g) We ordered them out of the house.

The major difference between these examples and the prototype of the construction is that the latter verbs are either not transitive (*sneeze, talk*) or they are not verbs that describe actions as a result of which objects are moved (*sneeze, walk, talk, tease, read, let, order*).

Thus, we have the following problem: Which verbs can be used in this construction, and which ones cannot? Fauconnier (1997) proposes that it is best to analyze the construction as a blend. On this view, the blend emerges from two input spaces:

(31) (a)   The basic construction that is found in many languages:

      NP   V   NP   PP
       a d b c
      John threw ball to me

    (b)   A "causal sequence":
        $[[a'$ ACTS] CAUSES $[b'$ MOVE to $c']]$

There is a straightforward set of cross-space mappings between the two input spaces that can be given as follows:

(32) Mappings between input1 and input2:
    $a \rightarrow a'$
    $b \rightarrow b'$
    $c \rightarrow c'$

In the basic, that is, prototypical, construction, the verb has all three elements in one: ACT, CAUSE, MOVE. For example, throwing involves a particular kind of action (ACT), the moving of an object (MOVE), and the causal link between the throwing action and the moving of the object (CAUSE). For this reason, d (e.g., *throw*) in the first input space may map to any one of these elements in the second input, which is represented as a set of mappings in (33):

(33) $d \rightarrow$ ACT
    $d \rightarrow$ MOVE
    $d \rightarrow$ CAUSE

Thus we get three different blends: d with ACT, d with MOVE, or d with CAUSE. Fauconnier (1997, 172–5) illustrates these blends with the following examples:

(34) $d \rightarrow$ ACT: The sergeant waved the tanks into the compound.

      $d \rightarrow$ MOVE: Junior sped the car around the Christmas tree.

      $d \rightarrow$ CAUSE: The sergeant let the tanks into the compound.

The three different blends inherit the syntactic structure of input1. This means that we have the same syntactic pattern in all three cases: NP V NP PP. However, their conceptual structure derives from input2, in which a' does something that causes b' to move to c'. As we saw, in the prototypical case the doing, the cause, and the moving are all present in one verb (such as *throw*), but in many non-prototypical cases (such as *wave, speed, let*) the complex d verb maps to and forms a blend with only a single element.

Although there is no syntactic innovation in this particular blended construction (the blend inherits the syntactic structure of input1), there can be semantic innovation. Verbs that can be mapped to either ACT, MOVE, or CAUSE can appear in the construction. Fauconnier (1997, 176) mentions some innovative examples of the construction:

(35) (a)   The psychic will think your husband into another galaxy.

     (b)   They prayed the boys home.

They verbs *think* and *pray* map to the ACT element, but leave the CAUSE and MOVE elements unspecified. Which particular verbs can be used in the construction in novel ways is an open question. A factor that may play a role is the issue of which actions are situationally interpretable as causing the motion in question. For example, in the case of *pray* (describing missing boys in a news item) the action of praying is situationally interpretable as an immediate cause of the motion.

But the construction of blended spaces does not occur only in the case of highly abstract domains such as anger and syntax. We routinely construct blended spaces in the most mundane activities we perform. As an example, consider one such mundane activity, "trashcan basketball", originally proposed and analyzed by Coulson (2000). Let us look at some of the features that make this game a blend. (The description below is based on Fauconnier–Turner 2002.)

Imagine that you are tired and frustrated with studying and doing homework, and, to have some fun, instead of simply dropping a piece of waste paper into the trashcan you crumple up the paper into a spherical shape, take up a basketball player's position, carefully take aim of the trashcan, move your arm, wrist and hand like a basketball player in the

course of a shot, slowly release the crumpled up paper, which travels majestically through the air and lands in the trashcan. Your roommate or friend sees this, gets up from the chair, and does the same thing with another piece of paper. He misses the trashcan, and comments: "You're one up." Soon you have a game going. This is trashcan basketball.

It is clear that the game is composed of two domains: basketball and the disposing of paper into a wastebasket. In this case, the input spaces are structured by the frame (domain) of basketball and the frame (domain) of disposing waste paper. There are some obvious mappings between the two domains: the person disposing the paper corresponds to a basketball player, the crumpled up paper to the ball, the wastebasket to the basket, and so forth. This structure looks like a conceptual metaphor, in which we have the game of basketball structured by disposing paper into the wastebasket. But there is more than that to trashcan basketball.

First, how can we explain the mappings between the two domains? On what basis do the mappings emerge? In the theory of conceptual integration, in addition to the two input spaces (source and target) we used in metaphor theory we assume the existence of a generic space which contains what is shared by the source and target. In the case of trashcan basketball, it is the putting of a vaguely spherical object into a receptacle, or container. This generic-level structure is shared by disposing paper and basketball. On the basis of this generic-level structure, we can easily construct the mappings between the two activities.

Second, in addition to the generic space and the two input spaces we have a blended space: This is trashcan basketball. In it, we have a crumpled-up-paper-basketball, bored and frustrated students as basket-ball players, a wastepaper-basketball basket, throwing the wastepaper-basketball in basketball fashion, and so on. All of these emerge from the projection of certain elements in the input spaces to the blended space and the fusion of the elements in that space. Moreover, we also have elements in the blend that derive from one of the inputs but are not fused with other elements. One example of this is the counting of shots and keeping score that comes from the basketball domain and is used in the blend.

Third, it is not the case that everything that we find counterpart for in the two inputs is projected into the blend. Take placing wastepaper into the wastepaper basket and the corresponding element of placing the ball into the hoop in basketball. Although the two elements match each other perfectly, they are not projected into the blend. In trashcan basketball, we do not have the simple placing of the crumpled-up-paper-

basketball into the wastebasket in the blended game. This action would be too easy for the purposes of playing the game. In other words, as soon as we begin to play the new game that is based on some of the mappings between the inputs, new structure emerges. This is called "emergent structure" in the blend. In this particular example, a certain move that has counterparts in the inputs is left out of the game. In other examples, the players in the blend will learn that they have to adjust the nature, intensity, etc. of their movements due to the physical environment and the social interaction in the blend. For example, because of the lightness of the "new ball" in the blend, they have to adjust the strength of their arm movements in throwing the "ball" into the "basket". The structure of the network can be given as in Fig. 3 (taken from Kövecses, in preparation).
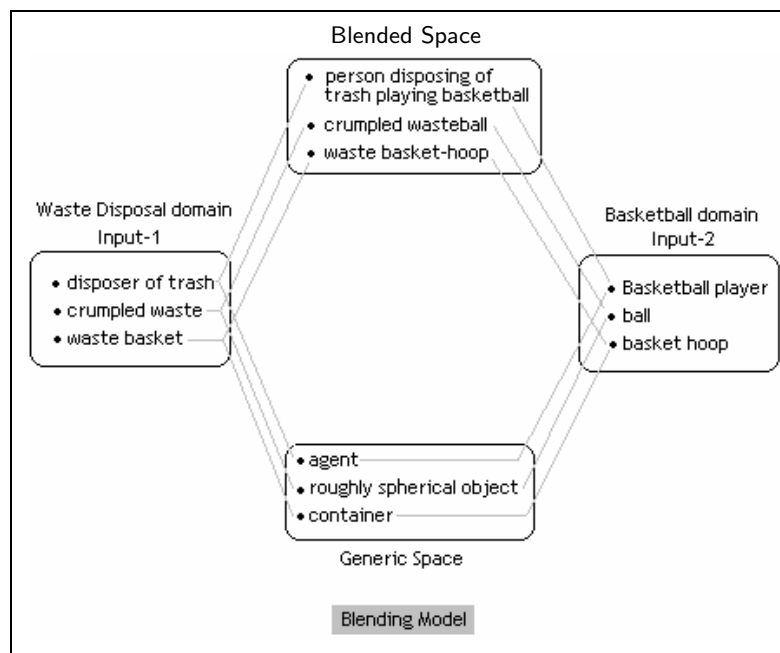

Fig. 3

The main point of this example is that blends are not esoteric abstract structures. They can be found in how we make sense of our emotions and the structure of the sentences we use but also in how we construct mundane activities such as trashcan basketball. The conceptual apparatus we

need to account for all the examples is the same; we need input spaces,
generic and blended spaces, mappings between the spaces, projections
from the input spaces to the blend, and so forth.

10. Conclusions

In this paper, three general issues were examined. First, what cognitive
processes play a role in making sense of the world around us? Second, how
do these cognitive processes contribute to our understanding of issues in
language? Third, how do the same cognitive processes provide an account
of a wide range of social and cultural phenomena?

To begin with, we have found that we make use of a relatively
small number of cognitive processes in making sense of our experience.
We categorize the world, organize our knowledge into frames, we make
use of within-frame mappings (metonymy) and cross-frame mappings
(metaphor), build image schemas from bodily experience and apply these
to what we experience, divide our experience into figures and grounds,
set up mental spaces and further mappings between them in the on-line
process of understanding, and have the ability to skillfully and creatively
integrate conceptual materials from the mental spaces that we set up. We
do not do most of this in a conscious way; our cognitive system operates
unconsciously most of the time. It is these and some additional cognitive
processes not discussed in this paper that participate in our unconscious
meaning-making activity.

With the help of these cognitive processes we can account for many
(or perhaps most) of the phenomena of meaning in language in a coherent
fashion. The theory that emerges from the application of these cognitive
processes to our understanding of meaning in language will be very dif-
ferent from other theories of language. Most importantly, the theory will
be a theory of meaning, and not one of form. On this view, even highly
abstract and schematic forms (such as N, V, NP V NP, or NP V NP
PP) are seen as having meaning; as a matter of fact, the only justifica-
tion of the existence of such abstract and schematic forms is their role in
the expression and understanding of meaning as being part of "symbolic
units", which consist of combinations of meaning and form (Langacker
1987). On the cognitive linguistic view, the scientific study of language
cannot be the study of the manipulation of such abstract and schematic
forms (i.e., syntax); the only legitimate and scientific goal in the study of

language is the study of **meaning** in language (including the meaning of abstract symbolic units) and how the cognitive processes discussed above play a role in this.

But most importantly for the purposes of this paper, we have seen that the same cognitive processes help us make sense of a wide range of social and cultural phenomena. Understanding the nature of debates about art, the issue of motherhood, setting up ideals and stereotypes to function in the world, the structure of political thought, the understanding of literature, and others discussed in the paper are only some of the issues that we can make sense of by making use of such cognitive processes. The cognitive processes described by cognitive linguistics are not merely ways of accounting for language; they are ways of accounting for many aspects of our social and cultural reality. (Such a suggestion is in the spirit of Turner (2001), who discusses the issue in relation to conceptual integration, and Kövecses (2005), who discusses it in relation to conceptual metaphor.)

As we have seen, our main meaning-making organ, the mind/brain, is shaped by both bodily and social/cultural experience. Image schemas, correlation-based metaphors, and the like arise from bodily functioning and are at the same time imbued by culture (e.g., by applying alternative frames to the "same" aspect of reality). Both the mind/brain and its product, meaning, are embodied and culture-dependent at the same time (see Kövecses (2005)). It is the goal of the cognitive linguistic enterprise to characterize the functioning of such an embodied and cultured mind in relation to language and beyond it.

Given such a wide scope of the field, we need to ask whether the name "cognitive linguistics" is an appropriate one. For reasons mentioned in the introduction, I believe it is not. Perhaps terms such as "cognitive social science" or "cognitive semiotics" would be more appropriate. They would reflect more faithfully both the nature ("cognitive") and the scope of the enterprise ("social", "semiotics"). By accepting such designations for the field, we would indicate that the study of language, and especially meaning in language, is just a part of a more general meaning-making activity that we as human beings are all engaged in—no matter which language we speak and which society we live in. In other words, after working out all the connections among the components of the meaning-making process (including embodiment, language, mind, and culture) in a much more detailed and comprehensive way than I have been able to do in this paper, we might arrive at a "unified science" of meaning-making

that would allow us to make sense of, say, semantic anomaly and trashcan basketball by utilizing the same cognitive apparatus in human beings.

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