7

Embodied Meaning and Cognitive Science

Mark Johnson

Eugene Gendlin's most profound philosophical achievement has been to show us a way to recover, and to think by means of, the vast realm of embodied meaning that exceeds all our concepts, distinctions, and symbolic forms. In a number of works over the course of his career, Professor Gendlin has brought to our attention the amazing intricacy of our experience, understanding, and thought that has been overlooked and marginalized by mainstream philosophy since the Enlightenment, including, most recently, all first-generation cognitive science. By "first-generation" cognitive science I mean the functionalist view that the mind and reason can be studied in terms of their functions alone and that these functional relations can be represented by formal symbol systems, especially formal logics. On this view, which underlies generative linguistics, information processing psychology, and classical artificial intelligence, the fact of human embodiment plays no essential role in the functions of mind and reason. This conception of disembodied reason is rooted deeply in our Enlightenment view of the person that underlies not just our dominant philosophical theories but also makes up much of our common cultural understanding.

In contrast, "second-generation" cognitive science treats the mind, concepts, meaning, and rationality as embodied, and therefore as not reducible merely to functional relations or programs. Recent empirical studies from such fields as linguistics,[1] psychology,[2] anthropology,[3] philosophy,[4] and neurophysiology[5] have revealed the role of our bodily

experience in the grounding and structure of our conceptual systems, in the nature of our reasoning, and in the ways we communicate.

Gendlin approaches the embodiment of meaning from a unique perspective that comes out his intellectual training and clinical work. First, he was educated as a philosopher with a strong background in phenomenology, which accounts for his deep insight into lived experience and the realm of human meaning and order underlying our formal and conceptual distinctions. Second, as a practicing psychotherapist, he is adept at helping us become aware of hitherto hidden dimensions of our experience and understanding. Just as psychotherapeutic methods seek to uncover experiences and structures that have been submerged in the unconscious, similarly, Gendlin's philosophical method highlights dimensions of meaning of which we are hardly ever aware, and that lie beyond formal relations and articulate symbols. His works, therefore, are more than theoretical investigations. They are also practical exercises in self-understanding intended to change our lives. They do this by dipping down, over and over again, into the reservoir of meaning and thought that makes up our embodied experience and that goes beyond our formal distinctions and patterns of thought. Gendlin thus employs a unique blend of phenomenological and psychotherapeutic methods that lets us think and feel our way back into the complex intricacy of our experience from which the structured, formal aspects of meaning and conceptualization arise.

Gendlin's work raises a deep philosophical question concerning the possibility of gaining access to a meaningful order that exceeds formal patterns. What I want to ask is whether Gendlin's way of recovering this submerged continent of embodied understanding can give us any sort of empirically responsible theory of meaning and of inference structure. Second-generation cognitive science certainly shares Gendlin's concern with the embodied and imaginative nature of human understanding and reasoning, and it wants to do justice to the workings of this part of our experience that has been ignored in most theories of meaning, concepts, language, and knowledge. However, Gendlin thinks that it is a serious mistake to assume that our situated understanding consists solely of forms, patterns, and relations that can be symbolically articulated. He argues that, as soon as we specify these forms and patterns, we necessarily overlook or suppress the intricacy of experience that gives rise to these forms. Consequently, Gendlin thinks that even second-generation cognitive science must be guilty of the same mistakes of blindness and exclusion that he thinks plague any structural modes of explanation. My central concern in this paper is to examine whether this charge is legitimate and

to ask what a satisfactory theory of meaning, understanding, and reason should involve.

The question, in other words, is whether our methods of structural analysis and explanation limit us to no more than naming what we experience as form/structure/pattern and thereby cause us to miss *the way* our experience does what it does—the way it implies, points, opens up, and transforms itself. Do our methods of analysis necessarily cause us to overlook the working of these dimensions of meaning, because we can only articulate them via symbolic forms? Is it possible to give an empirically responsible theoretical account of the embodied dimensions of meaning and understanding that underlie our symbolic forms?

1. Gendlin's Project: Thinking beyond Patterns

Gendlin's main project is to recover the situations out of which forms and patterns emerge. This is the core of his entire philosophical program, and he argues that we suffer from a massive cultural forgetting of all of the intricacy that goes into the making up of our world. As he says, "My project is to think—about, and with—that which exceeds patterns (forms, concepts, definitions, categories, distinctions, rules . . . . .)."[6] Notice the precision and economy of this summary thesis. Gendlin wants not only to *theorize about* these nonformal dimensions of meaning, figuring out what they are and how they work. In addition, and more importantly, he also wants to think *in* and *with* them in this very inquiry, for only in that way can we grasp that which exceeds forms.

But now we might ask why it should be necessary to try to think in these ways. Gendlin's answer is that the failure to do so condemns us to never being able to understand who we are, how language works, or how we reason. A mode of thinking that employs only forms, distinctions, patterns, and rules will necessarily miss the very embodied situational experiences that make these forms meaningful in the first place. The fateful error, which Gendlin attributes not just to Western philosophy, but to our general cultural understanding, is to miss a large part of what goes into making something meaningful to us. We then are tempted to mistake the forms for that which they inform, and we fool ourselves into thinking that it is the forms alone that make something what it is—that make it real and knowable.

Such a strategy of exclusion leaves out the body and our situated, embodied practices, along with all their intricate, complex meaning. Lakoff and I have documented the denial of the body in contemporary

theories of meaning and mind, and we have traced this prejudice at least as far back as Enlightenment philosophy.[7] In order to get a sense of what this suppressed bodily dimension of meaning and experience consists in, let us consider one of Gendlin's favorite examples, that of a poet searching for the right words in an unfinished line:

> The poet reads the written lines over and over, listens, and senses what these lines need (want, demand, imply, ...). Now the poet's hand rotates in the air. The gesture says *that.* Many good lines offer themselves; they try to say, but do not say—*that.* The blank is *more precise.* Although some are good lines, the poet rejects them.
>
> That . . . . . seems to lack words, but no. It knows the language, since it understands—and rejects—these lines that came. So it is not pre-verbal; Rather, it knows what must be said, and knows that these lines don't precisely say that. It knows like a gnawing knows what was forgotten, but it is new in the poet, and perhaps new in the history of the world.
>
> Now, although I don't know most of you, I do know one of your secrets. I know you have written poetry. So I can ask you: Isn't that how it is? This . . . . . must be directly referred to (felt, experienced, sensed, had, ...). Therefore, whatever terms we use for such a blank, that terms also needs our direct reference.
>
> The blank brings something new. That function is not performed by the linguistic forms alone. Rather, it functions *between* two sets of linguistic forms. The blank is not just the already written lines, but rather the *felt sense* from re-reading them, and *that* performs a function needed to lead to the next lines.[8]

Whether in poetry or in the activities of our day to day lives, we all know the kind of experience Gendlin is describing—that experience of, first, coming up with new candidate words for completing the line; second, of testing them out to see whether they are "right," or at least "better"; and, third, of finding the words that seem appropriate and that carry us forward in our thinking. Several important points need to be emphasized regarding such experiences and the ways they reveal important aspects of meaning and reasoning.

1. There is a nonlinguistic dimension—the nonformal side of the relation between our intricate experience and our words, symbols, or other patterns—that gets its fulfilment in and through the words we try out as candidates to complete the line. This other part, this . . . . . , is not itself linguistic, in that it is not the word(s) we are seeking for.

2. Yet, neither is it utterly distinct nor separable from the words or forms or distinctions. That is why Gendlin says that it is not preverbal,

since it "knows" when we come up with the best (or at least a better) linguistic or symbolic expression to fulfill it. Gendlin cautions us against the mistake of thinking that there are two distinct and autonomous sides of any experience—the felt sense and the formal expression—that could exist without each other. These are not two independent entities that are only externally related. Instead, they are two dimensions of a single, ongoing activity, each one intrinsically related to the other.

Thus, Gendlin argues that we must never think of the formal, patterned, "objective" side as somehow copying the subjective side, for that would entail that the words could stand in for, or represent, the subjective side, and thereby replace it. As he says, "Between the subjective and objective sides there is not a relation of representation or likeness. The words don't copy the blank. . . . The explication releases *that* tension, which was the . . . . . But what the blank was is not just lost or altered; rather, *that* tension is *carried forward* by the words."[9] So, we do not have two independent entities externally related, but one continuously developing situation that we identify, via reflection, as having these two intimately interwoven or blended dimensions. It is for this reason that the words or formal distinctions are not adequate in themselves. If they copied the "subjective" side, then that side would be eliminable, replaceable by the forms and patterns. Conversely, the subjective side, the . . . . . , is what it is only in relation to the forms that give expression to it.

3. Notice especially that this nonformal side is not vague, mushy, empty, or chaotic. It is, as Gendlin says, extremely *precise.* It knows which words or forms are appropriate to carry forward the meaning that is developing. It is so precise that it rejects many candidates as inadequate. It is vague, but only in a rich positive sense, namely, it is full of possibilities that are not yet realized, and so it only *seems* to lack precision. I would say that it is full of embodied *structure,* if that term had not been lumped together by Gendlin along with "form" and "pattern."

4. The blank, the . . . . . that the poet seeks to realize or fulfill, "carries forward" the meaning that has been developing in the poem, or in some ongoing experience we are having, and it points toward what is to come next. Gendlin says that the situation "implies" (in a very broad and enriched sense) what is to come next as the situation develops. It implies various possibilities for experience, not in the sense that they are logically deducible from the situation as it is presently formed, but rather insofar as the situation can be carried forward by our pursuing one or more of these possibilities.

So, we are living in and through a growing, changing situation that opens up toward new possibilities and that changes as it develops. That is the way human meaning works, and none of this happens without

our bodies, or without our embodied interactions within environments that we inhabit and that change along with us. A "situation," as Gendlin uses the term, thus has as two of its abstract aspects an organism and its environment. But it would be a mistake, as Lewontin and Levins observe, to think of the organism and its environment(s) as autonomous, independent entities that are only externally related. Rather, organisms and environments are co-evolving aspects of the experiential processes that make up situations.[10]

This explains why we should not think that our embodied meaning, understanding, and reasoning could ever be adequately thought or grasped by our concepts, symbols, rules, or patterns. Our situations, with all of their summing up, implying, and carrying forward, are *embodied situations.* Meaning, therefore, is embodied. And neither the "subjective side" (the nonformal, the nonconceptual, the . . . . .) nor the "objective side" (the forms, patterns, words, concepts) is the meaning in itself. Meaning resides in their situational relation as that relationship develops and changes.

Gendlin is both careful and elegant in spelling out the complexity, the intricacy, and the richness of situations as they work in our lives.[11] But the most urgent question that his subtle analyses raise for me is whether it is possible to incorporate these profound insights into a more adequate cognitive science. Over the last fifteen years George Lakoff and I, along with many others working in second-generation cognitive science, have believed that our studies of the embodied and imaginative nature of concepts, meaning, and reasoning are steps toward a cognitive science that does justice to the embodiment of all human understanding. Recently, however, Gendlin has argued that our methods do not really allow us to get at the kinds of nonformal thinking that he is investigating. Let us look at his argument as to why no account of metaphor, or even embodied metaphorical meaning, can capture that part of thought that exceeds all patterns.

2. Embodied Metaphorical Meaning

Besides the phenomenological tradition, the only major orientation to take seriously the embodiment of meaning is cognitive linguistics, or, a little more broadly, second-generation cognitive science. Cognitive linguistics argues that model theory, objectivist semantics, and all formalist approaches that rely on formal logic are necessarily inadequate, because they cannot account for either the embodied or the imaginative

dimensions of meaning and conceptual structure. The fundamental assumption of cognitive linguistics is that meaning and value are grounded in the nature of our bodies and brains, as they develop through ongoing interactions with various environments that have physical, social, and cultural dimensions. The nature of our embodied experience motivates and constrains how things are meaningful to us. But besides being embodied, meaning is also imaginative, in that it involves image schemas, metaphors, cognitive prototypes, metonymies, and other types of imaginative structure out of which our world is worked.

Classical objectivist semantics treats meaning as an objective relation between inherently meaningless symbolic forms and mind-independent states of affairs existing in the world. Languages are regarded as formal systems to be modeled using formal logics. The vast majority of semantic theory and theory of knowledge in the twentieth century is some version of this basic idea, from generative linguistics, to model theory, to artificial intelligence, to theories of epistemic justification. Such views give rise to the view that all meaning is propositional, and this, in turn, supports "truth-functional" theories of meaning, in which the meaning of a proposition is taken to be the conditions under which it would be true or false, that is, the conditions under which it would have a truth-value. Theories of knowledge from this perspective are theories of representation concerning how a proposition can stand in a correspondence relation to some state of affairs in the world.

What all orientations of this kind miss is the embodied and imaginative nature of concepts and the reasoning we do with them. None of them has any place for the role our bodies play in how we experience and make sense of things, since they mistakenly assume that words and concepts can get their meanings solely by picking out objectively existing states of affairs. Moreover, there is no place in these accounts for the central role played by various kinds of imaginative structure in our concepts and reasoning. The reason for this is that concepts are supposed to be "literal" and either to fit or not fit the world. These are supposed to be objective matters, having nothing to do with how people make sense of things, and especially having nothing to do with imaginative devices such as metaphor, which is thought to lack any determinate literal meaning (and, hence, any determinate truth-conditions).

In radical contrast with this traditional objectivist view, recent cognitive science has revealed that the human conceptual system, human languages, and human reasoning are all irreducibly and pervasively metaphoric and imaginative in nature. Furthermore, we have discovered that these metaphors that make up our situations are grounded in our embodied interactions. The metaphors and other imaginative structures

that make up our embodied understanding are not merely in the *words* we use—they are not merely linguistic. Rather, they make up the very structure of our embodied understanding, and they are thereby structures of our conceptual system, of our inferences based on those concepts, and of the language that emerges from those concepts. That is why we call the metaphors "experiential" and not just linguistic, because we are claiming that our very understanding—our mode of being in and having a world—is metaphoric and imaginative.

Obviously, it is impossible here to survey all the types of embodied, imaginative structures of understanding that we have been studying, but they would include at least the following: prototype effects in categories, radial categories, image schemas, semantic frames, experiential metaphors, and basic-level categorization. To give some idea of the kinds of structures involved, let us consider briefly the nature of semantic frames, image schemas, and experiential metaphors.

Semantic Frames and Idealized Cognitive Models

Human beings understand their world by means of idealized cognitive models[12] for the kinds of entities, events, and situations we encounter in our everyday experience. Recent empirical studies in lexical semantics have shown that words do not map directly onto states of affairs in the world, but rather are defined by their roles in idealized models of situations, which are holistic structures called "frames."[13] Words get their meanings by the roles they play in frames. A semantic field of words is a group of words defined with respect to different roles in a single frame (e.g., "buy," "sell," "goods," "price" are defined relative to a commercial event in general, for which we have a "commercial exchange" frame). A single situation in the world can be framed in different, and often mutually inconsistent, ways. When frames have structure that extends over time, they are called "scenarios" or "scripts." And when they characterize our common understanding of how something works in the world, they are called "folk theories." Frames are *imaginative*, not only because they are idealized models that do not exist objectively "in the world," but also because they are defined partly by image schemas and experiential metaphors.

Image Schemas

Systems of spatial relations have been found to differ considerably among the languages of the world. However, they all appear to use a single set of "primitive" image schemas, that is, schematic mental images. Examples

of such image schemas include containers, paths, links, compulsive force, attraction, contact, balance, center-periphery, orientations (e.g., above-below, front-back, up-down). All of these are recurring structures of our bodily interactions in the world, and they exist across *all* our perceptual modalities (visual, tactile, olfactory, aural, etc.). They are not fixed structures or images, but rather dynamic patterns of our interactions within various evolving environments. At present, they are being modeled in terms of known types of neural structures in the brain, such as topographic maps, center-surround architecture, orientation tuning cells, etc. Such modeling indicates that image schemas can be characterized neurally, and that their peculiar properties arise from the neural structures peculiar to our brains, given the nature of our ongoing interactions with the kinds of environments we inhabit.

Image schemas define spatial inference patterns. For instance, if object A is inside container B, which is inside container C, then object A is inside container C. Such spatial inference patterns can be the basis for abstract inference patterns. Conceptual metaphorical mappings appear to preserve image-schematic structure (e.g., patterns of containment), and, in so doing, they map spatial inference patterns onto abstract inference patterns.[14] Thus, for instance, we reason abstractly that if concept A is "contained within" concept B, which is "contained within" concept C, then A is contained in C—that is, if A is in B, and B is in C, then A is in C. There is considerable evidence of this sort to suggest that abstract reason arises from the interplay of metaphors and image schemas, and that it is grounded in our bodily experience.[15]

Since image schemas are not in the "objective world," but arise from properties of our bodies and brains acting within environments, they do not have a purely objective character. But since they are determined in part by our biology and by the world as we experience it, they are not purely subjective either.

One of the most philosophically important consequences of what has been discovered about image schemas is that they both characterize basic inference patterns and are themselves characterized by the nature of our bodies and brains, relative to our purposes and situational interactions. The idea that inference patterns can have a bodily basis is utterly inconsistent, both with objectivist views of pure, transcendent reason, as well as with deconstructivist views of reason as the arbitrary play of an unfettered imagination.

Experiential Metaphor

Research in cognitive linguistics has revealed a vast system of thousands of mappings across conceptual domains that permit us to understand

more abstract concepts in terms of more concepts tied to our embodied interactions.[16] These mappings preserve image schemas, and thereby allow us to use the "logic" of physical space and our spatial experience as the basis for abstract inference. They permit abstract inference by mapping knowledge about concrete domains onto abstract domains. The "container logic" of classical Aristotelian syllogistic logic is a good example of this bodily based reasoning and of the way meaning is embodied. Over the last two decades numerous studies have appeared that show how our most basic concepts in virtually every area of human life (such as, morality, politics, economics, social relations, science, art, and religion) are understood by us via experiential metaphorical mappings.

For a number of years Lakoff and I called these "conceptual" metaphors, in order to emphasize two basic points: (1) that metaphors are not mere matters of words, but actually structure our concepts and our reasoning; and (2) that they are not merely formal structures, but rather are embodied imaginative structures. Since many people have misinterpreted the term "conceptual metaphor" as referring only to abstract, formal, propositional structure, when, in fact, these metaphors depend on our nonpropositional embodied experience, it is perhaps more accurate to call these "experiential" metaphors. This captures the fact that they are not just intellectual forms, but rather are the very stuff of our world as we experience, conceptualize, and reason about it.

As an example of embodied, experiential metaphor, I gave an extended account in *The Body in the Mind* of some of the ways in which metaphors of balance are tied into our bodily experience of balance. Beginning with the *balance* image schema that is present in our bodily sense of being balanced and losing our balance, I then argued that our other, less obviously bodily, senses of balance were metaphorical mappings that carry forward a basic *balance* image schema. These metaphorical senses included the notions of psychological balance, emotional balance, perceptual balance (as in our sense that a painting is balanced and well ordered with respect to its color values, negative and positive space, and visual "forces"), moral and political balance (as in equality, justice, fairness), and mathematical balance (as in arithmetical equality, or balancing of equations).

The point of this analysis was to help us to stop thinking of meaning as disembodied and formal, by showing how it grows out of our embodied experience in the world, which it calls up and draws upon even in our most abstract conceptual understanding. It is in this sense that meaning is embodied and imaginative. It is in this sense that we speak of metaphor as experiential and conceptual. On this view, even our understanding of "balancing" a mathematical equation is tied up with our mundane sense of bodily balancing. The balancing we do with, and feel within, our bodies

is submerged and not attended to in our mathematical reasoning, but it is nonetheless there, by virtue in part of the *balance* schema that works in our metaphorical understanding of mathematical equality and balance.

3. Gendlin's Critique of Cognitive Linguistics

Gendlin applauds the emphasis that cognitive linguistics places on embodied meaning:

> Both Lakoff (1987) and Johnson (1987) in their new books talk of something that is not just a pattern or a logical form. Johnson speaks of "concrete and dynamic, embodied imaginative schemata," which are surely not just logical patterns or images or diagrams. Lakoff talks of something "non-propositional." They have taken up an excellent strategic position, right on the interface, where they can assert both this embodied character, and also work on the logical side to collect and formulate what I have been calling "patterns that can be the same."[17]

Although Gendlin approves of our focus on the bodily basis of meaning, he worries that cognitive linguistics works exclusively "on the logical side," and thus risks missing the full richness of the situation itself. The source of the problem, according to him, is that the cross-domain mappings that define experiential metaphors (i.e., the mappings of entities and structures in one domain onto another domain of a different kind) are seen as being too *structural.* Gendlin proposes that "the embodied non-propositionals should not be thought of as if they were commonalities, classes, structures, or image schemata, although, we do also want to formulate those. I will try to show that the embodied non-propositionals function differently, not like commonalities or image schemata."[18] Gendlin's strategy is to show that we are not limited merely to thinking "*with* forms," which is what he thinks cognitive semantics is restricted to. In addition, we can learn to think "how they (the forms) are exceeded in use."[19]

I will argue that Gendlin's criticisms bear only on the classical theory of metaphor and not on a cognitive semantic theory. In fact, cognitive semantics lends empirical support to Gendlin's point of view. Still, it must be acknowledged that no current theories, either those of cognitive semantics or any other perspectives, have so far given an adequate account of the nonpropositional dimensions of metaphor, or of meaning generally. I shall end up suggesting that, indeed, this inability

to capture that which exceeds structure is a fundamental problem for all theories of meaning. About this, Gendlin is right, but his own account has certain limitations, too. In particular, it is not clear how his view can lead to empirical generalizations of the sort needed for a semantic theory and a theory of reasoning.

Gendlin's criticisms are directed against the traditional view of metaphor as a pairing of preexisting commonalities between two conceptual domains that exist independently, each with its own fixed structure. Gendlin correctly challenges this view on four counts. I want to support each of Gendlin's four critiques with evidence from cognitive semantics, and thereby to show that cognitive semantics has considerable resources for a theory of meaning and of metaphor of the sort Gendlin is proposing.

1. According to the classical view, a metaphor operates by highlighting preexisting similarities between two conceptual domains: "Classically, metaphor was said to be a crossing between two single situations."[20] The metaphor supposedly pairs up fixed structure in one domain (the source) with that in another domain (the target) so as to emphasize features that are similar across the two domains. The metaphor "Love is a journey," for example, would be understood under the classical view as matching preexisting features of journeys with those of love that are the same or similar.

Gendlin correctly observes that this cannot be all that metaphor does, for then there would really be no point in using metaphor. Beyond its possible rhetorical effects, such a metaphor could be replaced by a list of literal similarities between the two domains. Thus, Gendlin's first modification of the classical view is to insist that what is crossed in a metaphor are not two preexistent situations, but rather a whole "use-family" of the source domain term with the present situation in which the term operates as a metaphor.[21] By a "use-family" Gendlin means the entire family of situations in which a term has been, is, or can be, used.

Gendlin's notion of a "use-family" is captured in cognitive semantics by the notion of *semantic frames*.[22] Frame semantics shows that any given term will get its meanings relative to one or more semantic frames in which it is situated. As we saw earlier, within a given frame a term is defined in relation to a cluster of other terms that fall within that frame. For instance, one semantic frame for the term *drive* would include a complex cluster of terms related to all of the things we do with automobiles, including such terms as "vehicle," "start," "accelerate," "steer," "brake," "car," "stop," and many, many more. This would be merely *one* of many possible frames, all of which would form a very complex category structure for the concept *drive*, including frames that involve boats, golfballs, baseballs, hammers and nails, progress toward a goal, and many other frames.

Gendlin is correct, then, to insist that the whole use-family comes into play in metaphor, and that no traditional similarity theory of metaphor can be adequate to this dimension of metaphor. Metaphors are almost never simply matters of matching preexisting cross-domain similarities. The problem is not just metaphor, but rather the entire objectivist and literalist theory of concepts that underlies the similarity view. By employing a frame semantic analysis of concepts, cognitive semantics thereby avoids this kind of reductionism and literalism, and it is compatible with Gendlin's notion of the use-family.

2. Gendlin's second criticism is that "the commonalities do not determine the metaphor. Rather, from the metaphor, and only after it makes sense, is a new set of commonalities derived."[23] Again, Gendlin is right to claim that in many cases the meaning of a metaphor is not determined by some underlying set of features that are common between the source and target domains. In *Metaphors We Live By* Lakoff and I argued this same point at length by showing that in many cases we perceive similarities only as a result of the metaphorical mapping that induces them.[24] We described five kinds of situations in which metaphors "create" similarities. The crux of our argument is that many metaphors are based on *experiential correlations* that then make possible our subsequent perception of commonalities between the two domains. For example, while there is no intrinsic commonality or similarity between "more" and "up," we have the basic conceptual metaphor *more is up* in our culture (and apparently in all cultures) that is *based on* experiential correlations of the following sort: when we add more entities to a pile, the profile of the pile rises (goes *up*) in our perceptual field. The same experience occurs when we add more liquid to a container—the level rises. This experiential correlation is one possible basis for the *more is up* metaphor (as in, "The number of murders committed *keeps going up* each year," "The divorce rate is *rising*," "The gross national product *reached a peak* last quarter, and now its starting *down*"). Because of the *more is up* metaphorical mapping, it then seems natural to us that there are commonalities perceived between "more" and "up" that we do not perceive between "less" and "up."

In *The Body in the Mind* I also gave an extended example of the experiential correlations that ground the *purposes and destinations* metaphor and that create our sense of commonalities between the domains of physical motion and the achievement of some intention or purpose. The experiential basis for the metaphor is the frequent correlation that we experience between the achievement of a purpose or the satisfaction of an intention, on the one hand, and movement through space to some destination, on the other. An example of this would be the case of a baby satisfying her purpose of getting the rattle by crawling to the place where

it is and grabbing it. The experiential pairing of moving to a destination with achieving a purpose gives rise to the following *purposes are destinations* mapping:

Physical Motion Domain		*Intentional Domain*
Starting location A	→	Initial state
Goal (final location B)	→	Final (desired) state
Motion along path (from A to B)	→	Intermediate actions

Our sense that there are commonalities between the domains of physical movement and achieving purposes is thus based on this metaphorical conceptual mapping, which is, in turn, based on the experiential correlation between structures in the two domains, as noted earlier.

It is a mistake to think of a metaphor as a set of similarity statements in the first place. A set of cross-domain mappings *is not* a set of similarity statements. In order to see this crucial point, consider the mapping for one of our culture's basic conventional metaphors for love. Someone who experiences their love relationship to have "hit a dead-end" and to be "going nowhere" is conceptualizing love as a journey, according to the following conceptual mapping:

The *Love is a Journey* Metaphor

Journey Domain	*Love Domain*
Travelers	Lovers
Vehicle	Love relationship
Impediments to travel	Difficulties
Destination	Common goals

This mapping, which underlies the *love is a journey* metaphor, is the basis for all kinds of inferences we make about our love relationship. Based on these ontological correspondences given above, we use our knowledge of the source domain (journeying) to understand and reason about the target domain (love). Consequently, the way we conceptualize, reason about, and talk about our love relationship will be determined by the epistemic entailments that are based on the ontological correspondences given above. Which parts of our knowledge are brought into play, and how they are developed, will depend on the context. If, for example, one of the lovers should complain that, "This just isn't going anywhere," we can use the epistemic correspondences (based on our knowledge of the source domain of journeying) to understand what they mean and to reason about what might be done. If the love-vehicle isn't moving ("going

anywhere"), then there must be a reason. Perhaps there is a breakdown in the relationship (i.e., the "vehicle" has ceased to function properly). Then we must decide what is malfunctioning, whether it can be repaired, and whether it is worth the effort that would be required to fix it (i.e., "to get it going again"). Or, perhaps the relationship isn't going anywhere because it (the relationship-vehicle) has run out of fuel. Maybe there's a way to energize the relationship to get it going again. Or, we might find that we're not going anywhere because our progress is blocked (as in, "We've hit a road-block in our marriage"). Then we have to figure out whether we can go around, or through, whatever is blocking our path (where, for instance, the metaphorical blockage might be a financial, sexual, or communication problem).

Notice that the reasoning we do in this case is *not* based just on commonalities or similarities between the two domains. There is a shared image-schematic structure between these two domains, namely, the *source-path-goal* schema. On the basis of this shared structure, we go further to take the logic of the source domain and project it onto the target domain to give rise to *new* structure in the target domain. This projection is actually cognitively constitutive—it is a partial structuring of our concept of love. It is not the case that the two conceptual domains, journeying and love, each had the entity "vehicle" in them, and that the metaphor merely highlights these preexisting common features or similarities. Instead, "vehicle" is an entity in the source domain that gets mapped onto the love relationship in the target domain. Only on the basis of this mapping can we then draw the appropriate epistemic entailments about how we might possibly get a *stalled* relationship going, or *get beyond* or *through the roadblock*, or *overcome* some *obstacle* in our path. We understand why the "course of true love never did run smooth" in terms of inferences like these that are based on our knowledge of the source domain. In itself, a love relationship has no vehicles, no roadblocks, no dead-ends, no breakdowns. It acquires all of these, and the epistemic entailments that go along with them, from the metaphorical mapping.

Notice that the metaphor doesn't work by specifying some fixed similarity statements concerning the two domains (journeying and love). Rather, based on the correspondences, we make inferences, given our knowledge of the source domain. Consequently, the structure of a concept is not an all-or-nothing matter. It is not the case that conceptual structure either preexists in a fixed and completed realm of its own, or else that it is all radically constructed. As with our concept *love*, most of our basic concepts are defined by multiple conceptual metaphors that are sometimes mutually inconsistent (though not incoherent). There

will always be preexisting conceptual structure in both the source and target domains (as the invariance hypothesis demands), but conceptual metaphor will also be partially constitutive of our grasp of the target domain, by virtue of *additional* structure carried over from the "logic" of the source domain.

Work in cognitive semantics, therefore, has given a body of evidence that supports Gendlin's claim that metaphors are often the basis for *derived* commonalities between two domains of experience. Moreover, it goes beyond Gendlin's account to provide a theory of how these apparent commonalities can emerge for us in the first place.

3. Gendlin's third modification of the classical theory rests on his rejection of the view that a metaphor is defined by a single pattern of commonalities between the two domains. Instead, he argues, "a metaphor generates an endless chain of commonalities, not a single pattern."[25] His argument is that any present situation does not just contain structures or patterns that define the "here and now"; rather, a situation implicitly contains all the possibilities for what will happen in the future and how things will change over time.

Certainly, any metaphor has a measure of open-endedness about it, since it can be extended in many directions, subject to certain limits on the nature of the mapping.[26] In this sense, a metaphor used in a present situation has the potential to be elaborated in many possible ways, developing in a limited set of directions opened up by the mapping. But to say that there is a "limitless" chain of commonalities that can be generated seems to be an overstatement, at best. If Gendlin means only that there are a large number of future situations in which the metaphor could generate new meaning, then he is correct. However, the commonalities generated are indeed "limited" by the nature of the mapping and by the kinds of situations human beings can experience. Otherwise, a given metaphor could conceivably mean *anything*, which is clearly not true of metaphors in use within actual human contexts.

4. Gendlin's fourth and last criticism is the most profound, for it claims that the meaning of a metaphor is never reducible to a set of commonalities, patterns, or forms. Since Lakoff and I define metaphors as cross-domain conceptual mappings, it does seem that Gendlin is criticizing our kind of theory as being too structure oriented, and thereby missing an order that exceeds forms.

But just what is Gendlin's argument for this key claim? First, he defines a pattern as a fixed, logically consistent, unified conceptual structure. For Gendlin, a pattern must remain the same wherever it is asserted or affirmed, and it must be capable of being either true or false.[27]

Based on this narrow conception of a pattern as specified within formal logic, Gendlin's argument runs as follows: a metaphor may be used in two succeeding situations, such that a pattern that we would deny in the first situation would then be affirmed in the very next situation. But, if these patterns really are inconsistent, then the meaning of the metaphor cannot be derived from the original pattern alone. There must be something beyond the patterns that gives rise to them. He gives the example of a poetic line in which a girl standing in a field is called a rose. In our initial understanding of the metaphor we are unlikely to think that the pattern "rooted to the ground" would be part of the meaning. But what if, in the very next line, the poet says that she "stood stock still, timeless, rooted to the ground"? Obviously, "rooted to the ground" *can* mean something and be appropriate in that context. It could say a great deal about the kind of person she is. Gendlin argues that the metaphor of the girl as a rose cannot, therefore, be defined by patterns that represent commonalities that remain unchanged across all situations.

While Gendlin is correct in observing that we must account for the open-endness of metaphor, I want to suggest that there is something misleading about the way he frames the issue. From the perspective of cognitive semantics, this is not a case of, first, denying that the proposition "she is rooted to the ground" applies, and then, second, affirming that it does apply. Rather, this is a case of how our knowledge of the source domain comes into play as a situation develops. It *is* part of our knowledge about roses that they are rooted to the ground. In the first instance, however, *that* particular knowledge is not brought forth by the situation. In Gendlin's terms we would say that the crossing of the use-family of "rose" and the situation does not highlight *rootedness*. But as the situation develops in the poem, that very knowledge about roses becomes quite important, and it becomes part of the inferences we might draw about the girl.

So it is somewhat misleading to describe this example, as Gendlin does, as a case of first denying the proposition "she is rooted to the ground" and then turning around and affirming it. It is far more accurate to say that, *as the present situation develops*, we make use of different parts of the mapping, along with the corresponding knowledge we have about that particular part of the source domain. What was potentially present in the logic of the source domain becomes actualized within a particular context. George Lakoff and Mark Turner have recently employed this cognitive semantic theory to show how poetic metaphors can be creative by drawing on typically unused parts of conventional metaphorical mappings.[28]

4. Meaning That Exceeds Structure

We have seen that the traditional similarity theory of metaphor can treat only the fixed, preexisting conceptual structures. Consequently, it necessarily misses the nonpropositional and embodied experiential basis out of which the formal structure emerges, and relative to which it means and infers what it does. I have argued that cognitive semantics, with its emphasis on the embodied and imaginative character of meaning and reason, can explain many of the semantic phenomena that Gendlin rightly sees traditional metaphor theory as being incapable of explaining. Nonetheless, Gendlin correctly asserts that there is an inherent limitation to any theory of metaphor (or meaning generally) that gives only a structural analysis. *What will always be missed by such a view is the affective dimension, the mood, and the felt sense that lies at the heart of our experience of meaning.*

Cognitive semantics must face this limitation of its methods and recognize that it can never tell the whole story about meaning. But this is a limitation that will pertain to *any* empirically responsible theory. The reason for this inherent limitation is the following: an adequate semantic theory must make empirical generalizations concerning the phenomena it studies. These generalizations are not necessarily limited to propositional rules or principles. As we have seen, in cognitive semantics the generalizations can include such structures as cross-domain conceptual mappings of the sort that define conceptual metaphors. The reason cognitive semantics can go beyond the traditional theories of meaning is because it recognizes these other, nonpropositional, forms of explanatory generalization. In addition to conceptual metaphor mappings, there are metonymic correspondences and also counterpart relations between entities within different "mental spaces."[29]

However, cognitive semantics is limited to identifying and making generalizations about *structures* of various sorts (whether those structures are propositional, nonpropositional, image-schematic, or logical), in order to explain semantic phenomena and inferential structure. While I acknowledge this methodological limitation of cognitive semantics, I want to ask whether Gendlin's way of revealing the "order that exceeds forms" can actually lead to generalizations about meaning and inference, or whether it can only serve as a corrective to other semantic theories. In other words, my final question is whether Gendlin's view can contribute constructively to a semantics of natural language, or whether it can only point out the shortcomings of all semantic theories.

As an example of both the power and limitations of cognitive semantics, I want to consider a particular experiential metaphor, in order

to examine its embodied dimensions, and also to determine what in the metaphor cannot be captured by our analysis. Steven Fesmire has given an extended analysis of the experiential metaphor *mental disquietude is inhibited breathing*,[30] in which we understand various aspects of mental unrest and distress in terms of the phenomena associated with inhibited breathing. This experiential metaphor is typical of a general conceptual pattern people use to understand the mental realm in terms of the more concrete and highly articulated operations of the body. Eve Sweetser has named this universal generic mapping the *mind as body* metaphor, and she has documented its pervasiveness across many cultures.[31]

The *mental disquietude is inhibited breathing* metaphor is the basis for a large number of related expressions that we use to describe anxiety and mental dysfunction, such as:

"She was *choking with anxiety.*"
"Harry *choked* on the exam."
"Until she arrived, I was *breathless with anticipation.*"
"Don't get *all choked up* over a little test."
"Let's *take a breather* from this debate."
"The interrogation was *suffocating me.*"
"Your solution to the problem is certainly a *breath of fresh air*!"

Our understanding of mental disquietude in terms of the physical experience of inhibited breathing is but a part of a larger metaphor system in which we conceptualize mental functioning as breathing. The *mental functioning is breathing* metaphor consists of the following mapping:

Breathing		*Mental Functioning*
Flow of air	→	Flow of ideas
Constricted air flow	→	Disrupted flow of ideas
Inhibited breathing	→	Mental disquietude
Restored air flow	→	Revived free-flow of ideas

Fesmire identifies other related metaphors that interweave with *mental functioning is breathing*, especially those involving the relation of breath ("spirit") to consciousness, and the notion of the *flow* of ideas in thought. But, for our purposes, it is his analysis of the bodily grounding of the *mental disquietude is inhibited breathing* metaphor that is most relevant. He observes that the metaphor is based on a strong experiential correlation between mental tension and restricted breathing. Restricted breathing can generate tremendous anxiety and mental distress within us. Also, heightened anxiety is often accompanied by inhibited breathing.

Noting these experiential correlations, Frederick Perls even went so far as to claim that "suppression of excitement produces the breathing difficulty which is anxiety."[32]

We can see how this correlation of anxiety with inhibited breathing gives rise to the *inhibited breathing* metaphor by examining three kinds of mental disquietude.

1. Consider the case of actual restricted breathing due to a blocked air passage. If something is not done to relieve the blockage, you could die. That is why inhibited breathing generates tremendous anxiety. Once breathing is restored, you can, quite literally, *breathe again,* and this is accompanied by a felt lessening of anxiety.

2. Consider, secondly, a situation of high anxiety, such as when you are in a life-threatening situation or are subject to some other highly stressful condition. Your mental tension will typically be accompanied by, as its physical counterpart, inhibited breathing. As the anxiety lessens and the tension releases, you can *breathe once again.* This experiential pairing of mental tension and inhibited breathing can give rise to an experiential metaphor. The emerging metaphor can be seen in the ambiguous case where someone in extreme mental distress complains that she is "suffocating." She might, indeed, be actually finding it hard to breathe. But she might also mean, via metaphor, that she is suffering great anxiety.

3. This emerging experiential metaphor can then be extended to cover clear cases of metaphor in which there is no actual restricted breathing involved. To find a relationship, or a high-pressure meeting, or a heated discussion, *suffocating* may not involve any kind of apparent physiological distress. However, even in these explicit cases of metaphorical understanding, the physiological symptoms are often just below the surface of consciousness, and they are operating even though we are not presently aware of them. It is often quite difficult to distinguish the suffocation you experience in a relationship from an actual sense of physical tension and constricted breathing.

The key point I want to make with this example is that the meaning this metaphor has, and the way it operates in our conceptualization and reasoning, is thoroughly dependent on its bodily, experiential basis. In other words, how the metaphor works in our thinking depends on experiential pairings, feelings, and the felt sense that accompanies certain types of situations. Cognitive semantics can describe this experiential basis of meaning, in the same way I have given a very partial account of the *mental disquietude is inhibited breathing* metaphor. What cognitive semantics cannot capture in its generalizations, however, is the affective dimension of this experiential grounding of meaning. We can *point* to it,

but we cannot include in our mappings and generalizations the *felt sense* that is part of what the metaphor means to us, nor can we include the way it works in our experience.

As far as I know, there is no theory of meaning or metaphor that can capture this deeply embodied dimension *via empirical generalizations.* I am attracted to the cognitive semantics orientation chiefly because it can at least talk about and explore embodied meaning, whereas most semantic theories are objectivist in nature, and they pay no attention to the embodied and imaginative nature of human concepts and reasoning.

What I find that Professor Gendlin does better than anyone else is to lead us back down into that vast submerged continent of meaning that exceeds our logical forms and patterns. As I said earlier, he does this by an almost incantational technique that helps us dip down further and further into the situation in which meaning is *happening* here and now. Gendlin's remarkable blending of phenomenological and psychotherapeutic methods can open up hitherto hidden dimensions of the process of meaning and experience.

But what Gendlin's method cannot do is to give us semantic and inferential generalizations that purport to explain the phenomena of meaning and reasoning. Nor does he pretend to do this. Instead, he wants to assist us to think about, and with, an order that exceeds our logical forms and patterns.

What we need, then, if we want a more empirically adequate theory of human meaning, understanding, and reasoning is an ongoing dialogue between cognitive semantics and Gendlin's method for recovering the meaning and thought that lies beneath logical forms. We need to explore back and forth across the shifting boundaries that distinguish structures and forms from the embodied realm of experience out of which those forms emerge and in relation to which those forms have meaning. We need to seek semantic and inferential generalizations, but always keeping in mind what those generalizations miss. As Professor Gendlin says, we need to learn to think, not only *about* that order which exceeds and grounds forms, but also to think *in and by means of* it. Otherwise, we lose touch with the embodied situations that are the locus of our experience, our thinking, and our acting.

Reply to Johnson

Ours is a friendly discussion. Johnson says his findings corroborate my theory of metaphor. On my side I have argued only that if he were to give

a role in his theory not to "affects" or unspeakable realms as he seems to think I want, but to our sense of acting and speaking in situations, we would arrive at more and better formulations; we could cooperate in a "third-generation" cognitive science.

Empirical findings cannot adjudicate philosophical issues because philosophy can reinterpret findings and generate new variables. My philosophy should be able to meet Johnson's challenge. From the arena of intricacy which it opens we can specify many new parameters which can be operationalized. This has already led to what is now the most replicated finding in psychotherapy research.[1] As I go along here, I will set out specific predictions that my theory of metaphor generates.

We have three main disagreements:

1. I am far from rejecting or lacking theory: I offer a new type with both logical precision and experiential connections (see *PM*). Johnson summarizes and likes my theory of metaphor, but he takes me as opposing purely conceptual theory. I do not oppose this at all; I am only against reading concepts back as if they were "the basis of" the process that gives rise to them. That falsifies and hides the process. Without doing that, we can still gain all the advantages of conceptual models and logical inferences. Concepts expand experience, practice, and thought. They *carry* experiencing *forward.* "Carrying forward" is itself a concept which does that. We can use its logical structure, but we can also dip into its experiential way of working, and think further from that as well.

Johnson's concept of metaphorical "frames" lays open the metaphoric nature of speech. This success neither requires nor proves that metaphors are "based on" the frames and correspondences.

I take Johnson's empirical findings as seriously as he does: I let his findings stand on their own, and I think further from *them*; he reads his theoretical framework in behind them, and thinks further from his *framework*, rather than from what he has found.

2. I think that *all* word-use involves metaphorical crossing. I know that Johnson also rejects the notion of "literal" speech along with the whole "objectivist" approach, but he sometimes sounds as if he were speaking literally about the physical motion domain as if it were original or "basic."[2]

3. Thirdly, we differ in our conception of the body. Johnson has included a role of the body in speech, but he speaks of the body in terms of spatial movements, up, down, or "motion along a path." For me, the body's living-in its *environmental situation* is prior (already in plants), and continues with us also as more "basic" than the spatial grid. We move as part of living in situations, and only derivatively in a spatial grid. Johnson

does not include the role of the bodily sense of speaking, or of wanting to say or do something to change a situation. He thinks of the body in *space*; I think of it *in situations.*

Now I will reply to Johnson's critique of the four planks of my theory of metaphor.

1. Contrary to a long history, I have argued that a metaphor does not consist of two situations, a "source domain" and a "target domain." There is only one situation, the one in which the word is now used. What the word brings from elsewhere is not a situation; rather *it brings a use-family,* a great many situations. Which of the many uses now obtains is known only if one grasps what the word says now, in the present situation. To understand an ordinary word, its use-family must *cross* with the present situation. This crossing has been noticed only in odd uses which are called "metaphors."

Since metaphor is the crossing of a use-family and a present situation, we realize that *all word-use requires this metaphorical crossing.* Johnson agrees that what he calls the "source domain" is really a use-family, not a category system, but he also writes of a "very complex category structure, for example, for the concept *drive,*" including "vehicle," "accelerate," "car," "brake," "golf balls," or "nails." I think he means that it is not a single order of subcategories. I agree with Wittgenstein that a use-family does not operate by categories or a concept at all; it is "only a family resemblance." How a use-family functions is not determined by a concept. Wittgenstein brought up one situation after another in which, as soon as we use it, the same word immediately has a new meaning, often unrelated to any category system or concept.[3]

I would urge going *more deeply* into the question how we can sense, for example right here, that in the phrase "going deeply" *more is down.* Johnson has studied what he calls "inconsistent frames," but I ask: How do we sense which one now obtains? We know it only from grasping what the word says.

Johnson backs away from concepts that include more than their schemes. But concepts like "family resemblance," "unseparated multiplicity," and "crossing" enable us to think how the metaphorical meaning can be new. If Johnson included the role played by his bodily sense of the ongoing metaphorical *mapping,* he would find not only concepts, but also two unseparated multiplicities. Because he does not speak in this way, he sounds as if he assumed that a metaphor is "based on" already discrete correspondences.

2. I have argued that commonalities do not determine a metaphor (or word-use). Rather, *from* the metaphor, only *after* it has made sense, can a set of commonalities be derived.

Johnson first agrees, but then says that I have no theory to explain how the commonalities arise. I do have a theory and I do explain it, but my new kind of concepts do not import their schemes behind something. I will also *explain* this kind of "explain."

Johnson praises me for recognizing that the commonalities don't precede, but rather *come from* the metaphor. He says that he too has made "the same point." As he puts it "*in many cases* we *perceive* similarities only as a result of the metaphorical mapping that induces them" (my italics). He limits his agreement with "in many cases" and also by saying that some similarities were there in advance; only our *perceiving them* comes from the metaphor. He says: "The crux of our argument is that [in Johnson's view] many metaphors are *based on* experiential *correlations* that then make possible our *subsequent* perception of *commonalities* between the two domains" (his italics). He wants to distinguish between *basic* "correlations" and *resulting* "commonalities." For example, he thinks he knows that *more is up* is "based on" the "correlation" with the experience of adding more to a pile, so that "the profile of the pile *rises*." But I think prices "*rise*" because the numbers get larger, and we count *up* from 1. I know that he has analyzed these and many other cases. He imports a cognitive scheme in which *he* formulates the "correlations," and then selects the fewest that could account for the variety of instances. But what he calls a "basic" or "experiential" correlation seems no different in character from all the rest, which he calls "resulting" or "subsequent."

An empirical question is generated here: I predict that, if asked for basic correlations, different subjects will come up with different ones, and that Johnson's "profile of the pile rising" will correlate no more highly with those, than some of them with each other.

I don't think the similarities he calls "correlations" are formulated before Johnson formulates them. They don't exist before the metaphor happens. Even afterwards we don't formulate such correlations, unless someone fails to understand the metaphor. Then we take time and thought in order to come up with similarities to explain the metaphor, and differences to say what is *not* meant. "The girl is a rose"—how? She is similar in being soft, fresh, vulnerable, but different in that (for example) she is not rooted to the ground. We say what is similar and what is different. We explain: by "the pile rises" Johnson means that *the top* of the pile rises, not that the whole pile rises.

We both want to speak of the *activity of* mapp*ing* rather than antecedent or imposed traits. If allowed, words speak from mapping as it happens. This word "mapping" would acquire a more precise meaning right in this sentence, if we would let it speak from how it changes in the process it tells about here. *This* mapping changes (carries forward) *both*

what is "mapped," and what is mapped upon, just as the word "mapping" does when used in this context, here.

We could show empirically that people grasp a word's precise situational meaning immediately, without first separately perceiving discrete correspondences. I predict that people could immediately answer intricate questions about the meaning of an oddly used word, but would have to think a while before they could derive correspondences. I also predict that their answers about the meaning will correlate significantly more than their proposals for correspondences.

3. The third plank in my theory is that one can generate *an endless chain* of similarities and differences from *one* metaphor or word-use. For example, girls and roses are both living, beautiful, soft, fresh, natural, vulnerable, both grow for a long time and then come into bloom for a short time, on and on. We can also derive endlessly numerous differences from one metaphor.

Johnson reads my "endlessly numerous" as if I had said that one can assert just anything. Yet they all arise from the single, determinate way the word made sense. "Oh!" we say, "Yes, I get it." Then we can say in endlessly numerous ways what the metaphor meant, and did not mean. Its sense is *carried forward* by each such statement. Then people say (inaccurately) that each similarity and difference "was" implicit in the metaphor. So many are possible because a metaphor is an *unseparated multiplicity*; it can be carried forward by isolating (finding, making, differentiating, synthesizing . . . . .) an endless number of factors. A use-family is an unseparated multiplicity, and so is a situation.[4] A metaphor is their crossing, a new unseparated multiplicity.

A *crossing* is not the lowest common denominator, as it would be if the two domains had only fixed characteristics.[5] *Crossing lets each play a role in shaping the result, but crossing also opens the constraints of how each is already schematized, and reveals that each is also an intricacy.* That is why the meaning cannot be determined from the antecedents, only from the effect of the word in the situation.

I predict that if individuals are asked to make an inference from a metaphorically used word, they will justify and explicate the inference in terms of the *new* precise meaning, not in terms of the general definitions they listed before knowing the situation.

The new meaning of a word is precise. Yet it need not *follow deductively* from how one would have defined the use-family and situation before the metaphor or word-use. Of course, what the word means does *follow* from (the crossing of) the use-family and the situation, but we can know *this* (nonlogical) meaning of "follow" only if we let it say how we follow someone in ordinary speech.

Johnson wants to emphasize that the new meanings are not deducible from the old ones, but he lacks the terms for a nondeductive "following." I urge him to adopt my terms to say this. Then he could still formulate the neatest array of similarities that could organize the most instances, without having to read back as the cause of the process the same sort of things that result from it. Johnson makes it clear that he does not intend it so.

The process by which we speak every day is more precise and intricate than a scheme; we have to let it happen also in how we explain. Concepts such as "crossing" work like word-use.

Johnson speaks of correlations and resulting *similarities*. For Derrida it is *differences*. But both similarities and differences are implicitly generated by the use of a word. If they are read back behind the process of speech after it has happened, it seems as if speech derives from them. Then the process is covered, made to seem its own products. I also like products as well as process. I am not one of those who say that only the *journey* matters, not the destination. I value the existing network of metaphors Johnson shows. I value destinations and products, only I don't reduce the process to those. Let us think from and with how it exceeds its products. I reverse the order: samenesses and differences are generated from making sense in speaking and living.

Now I want to meet Johnson's challenge, and send a challenge back: I want to show that my theory of immediate new meaning (how saying these words changes *this* situation) can explain something that Johnson says but cannot explain: he emphasizes that we can make *valid* inferences about the "target domain" from a metaphor, but he accounts for this as applying "knowledge from the source domain to target." But if we know something *only* about the source, and apply that to the target, we are likely to be misled. Such a transfer of what we know about one thing to another of which we do not know it, is the sort of case that gave metaphor its bad reputation. *If the word did not acquire a new meaning governed by the present situation, inferences from source to target would mislead us.* We would surely be in jeopardy, if we imputed something to our love relationship, only because it is true of journeys!

Johnson says that *love* "acquires . . . vehicles, roadblocks, dead-ends . . . *and the epistemic entailments that go along with them. . . . Based on the correspondences* we make inferences, *given our knowledge of the source domain.*" He means that we know something about roadblocks. What do we know? For example, we know that a roadblock does not damage the road. If a roadblock is removed, the road is as passable as before. Johnson says that this knowledge enables us to infer that if what troubles our love relationship is removed, the relationship will be as before. *But we*

cannot infer this at all! What two people *call* "the roadblock" may well have damaged the road. Assume that one person did something disturbing, and has now stopped doing it. That person now says: everything is all right, isn't it? I'm not doing that anymore. But the other may say: "But I remember it every time we try to make love. When I turn on to you, I hit this *roadblock*. I can't keep on doing it." In *this* use the word "roadblock" generates a different correspondence. It's not like a roadblock that leaves an undamaged road. The "correlation" is rather with something that is harmless when one is standing still, but disastrous when one hits it after getting up speed.

Metaphors do involve *valid* correlations, but they are generated by the metaphor when the word makes new sense in the situation. The new correspondences are generated there. *The inferences are valid because they are generated from the precise new meaning in the target situation.* I think this is what Johnson means, and he could adopt my kind of concepts to account for it.

But if we are right, then why is metaphor so famous for fooling people? *Metaphors can fool those who do not know the target situation well enough to let it give the words a new meaning.* Then they are led to make inferences just from the source domain!

It is important to free "metaphor" from naming only misleading cases. We are quite dependent on new uses of words, so they had better not be *necessarily* misleading! We have always only the same words of the language to use, after all! Metaphor is more precise and more likely to be true to a situation, than predefined terms.

4. Johnson reads my fourth plank as if I wanted to encompass all eventualities, all future uses. But that is not why I speak of new uses. They show us something about *all* uses of words. Johnson has done a great deal by studying the network of metaphors. Yes, we often take well-traveled roads. I do not denigrate his beautiful work in showing the vast textures of metaphors.

The fourth argument of my theory says that even when we do formulate statements of samenesses and differences from a metaphor, these do not function only as patterns would. Samenesses and differences function in *two other* ways, which enable us to explain two kinds of truth: when it is said that the girl is a rose, we explain that it does not mean that she has roots. Then, if one does say that "she is deeply rooted," this must make sense: for example, "she is deeply rooted in her native soil." The requirement that a new use must make sense is *one kind of truth.* But we don't thereby give up our denial that she has roots; that is *another kind of truth.* (Doesn't the word "truth" make sense here, both times?)

We don't give up our earlier denial, although now we no longer deny *the word* "rooted" when *taken* in its new context. (The capacity to *take* in various ways is an implicit function [see chap. 1, "Functions of the Implicit"]). But we do continue to deny what we denied before. No flux here; this difference between flowers and girls is a lasting truth. Neither of these truths is a pattern (conceptual structure, rule, form, distinction, category . . . . .). For example, it might seem that "roots" is the spatial pattern of long strings dangling down. It seems safe to deny this pattern of the girl, but someone might say, for example, that vines clung to her, long tendrils dangling down from her, as her lover carried her. Neither the lasting truth nor new sense-making are governed by patterns, but in these two ways metaphor (word-use) is truthful and precise.

Johnson and I agree that new metaphorical meanings are not derived from preexisting similarities, and that metaphors can be true. I propose a kind of concepts that enable us to think with and about how that happens.

Chapter 7
Mark Johnson, Embodied Meaning and Cognitive Science

1. Much of the relevant literature is summarized in George Lakoff, *Women, Fire, and Dangerous Things: What Our Categories Reveal about the Mind* (Chicago: University of Chicago Press, 1987), and in Mark Turner, *Reading Minds: The Study of English in the Age of Cognitive Science* (Princeton: Princeton University Press, 1991).

2. Raymond Gibbs, "Psycholinguistic Studies on the Conceptual Basis of Idiomaticity," *Cognitive Linguistics* 1, no. 4 (1990), 417–62. See also Raymond Gibbs, *The Poetics of Mind* (Cambridge: Cambridge University Press, 1994).

3. Maxine Sheets-Johnstone, *The Roots of Thinking* (Philadelphia: Temple Univeristy Press, 1990).

4. Mark Johnson, *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reasoning* (Chicago: University of Chicago Press, 1987).

5. F. Varela, E. Thompson, and E. Rosch, *The Embodied Mind: Cognitive Science and Human Experience* (Cambridge: MIT Press, 1991); Gerald Edelman, *Bright Air, Brilliant Fire* (New York: Basic Books, 1992).

6. Eugene Gendlin, *Thinking beyond Patterns: Body, Language, and Situations*, unpublished manuscript. A version of this appeared in *The Presence of Feeling in Thought*, ed. B. den Ouden and M. Moen (New York: Peter Lang, 1992).

7. Lakoff, *Women, Fire, and Dangerous Things*, and Johnson, *The Body in the Mind.*

8. Eugene Gendlin, "Crossing and Dipping: Some Terms for Approaching the Interface between Natural Understanding and Logical Formation" (unpublished manuscript, University of Chicago, 1991).

9. Ibid., 38.

10. R. Levins and R. Lewontin, *The Dialectical Biologist* (Cambridge: Harvard University Press, 1985), 89.

11. Most of the first half of *Thinking beyond Patterns* is devoted to this task of being very precise about what lies in our experience. I make no pretense of capturing his elegant and nuanced formulations.

12. The term "idealized cognitive model" is coined by Lakoff in *Women, Fire, and Dangerous Things*, which provides an extensive taxonomy of types of cognitive models that we use to understand situations.

13. Charles Fillmore, "Frame Semantics," in *Linguistics in the Morning Calm*, ed. Linguistic Society of Korea (Seoul: Hanshin, 1982).

14. George Lakoff, "The Invariance Hypothesis: Is Abstract Reason Based on Image Schemas?" *Cognitive Linguistics* 1, no. 1 (1990), 39–74; Turner, *Reading Minds*, 172–82.

15. Some of this evidence is surveyed in Lakoff, *Women, Fire, and Dangerous Things*, 456–59.

16. George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980).

17. Gendlin, "Crossing and Dipping," 47.

18. Ibid., 47–48.
19. Ibid., 48; parentheses mine.
20. Ibid., 51.
21. Ibid.
22. Fillmore, "Frame Semantics."
23. Gendlin, "Crossing and Dipping," 52.
24. Lakoff and Johnson, *Metaphors We Live By*, 147–55.
25. Gendlin, "Crossing and Dipping," 52.
26. One primary constraint on metaphors, for example, appears to be what George Lakoff has named the "Invariance Constraint" (Lakoff, "The Invariance Hypothesis."). This constraint can be expressed as follows: In any metaphorical mapping the image-schematic structure of the source domain is mapped onto the target domain, but only insofar as it does not conflict with any preexisting structure in the target domain. This is an empirical hypothesis that is subject to disconfirmation by examples. So far, the constraint appears to hold in all of the cases we have examined.
27. Gendlin, "Crossing and Dipping," 54.
28. George Lakoff and Mark Turner, *More Than Cool Reason: A Field Guide to Poetic Metaphor* (Chicago: University of Chicago Press, 1991).
29. Gilles Fauconnier, *Mental Spaces: Aspects of Meaning Construction in Natural Language* (Cambridge: MIT Press, 1985).
30. Steven Fesmire, "Aerating the Mind: The Metaphor of Mental Functioning as Bodily Functioning," *Metaphor and Symbolic Activity* 9, no. 1 (1994), 31–44.
31. Eve Sweetser, *From Etymology to Pragmatics* (Cambridge: Cambridge University Press, 1991).
32. Frederick Perls, R. F. Heferline, and P. Goodman, *Gestalt Therapy: Excitement and Growth in the Human Personality* (New York: Julian Press, 1951), 118.

Reply to Johnson

1. A succession of research studies shows that psychotherapy clients who are successful (by many criteria) engage in significantly more reference to directly felt events during their tape-recorded therapy hours, as measured by reliably recognizable linguistic turns. See my "What Comes After Traditional Psychotherapy Research," *American Psychologist* 41, no. 2, 131–36.
2. One strand in our tradition assumes that reality (events, situations, whatever we study . . . . .) consists *first and primarily* of mere space-and-time fillers, things that move in logic-like mathematical patterns. They have meaning "given" to them only *secondarily*. If we recognize it, we need not make this assumption. "The pile rises" and "the ball goes up" do not mean pure Newtonian motion just literally. Every word brings many uses, and we must grasp what it says here. When "the pile rises" we know that it is because more was added; it didn't rise like dough. And, when "the ball goes up" we know it did not walk. Those are just as

dependent on the metaphorical crossing, as when our love relationship is "really going." There is no uncrossed event (experience, situation . . . . .), but there is always an openness for further crossing.

3. In etymology words often move to neighborly realms rather than by correspondence. "Journey" is a move of the word "*jour*," and used to mean *a day's* work *or* travel. It is an extension, not a similarity-correlation. "Drive" came from driving cattle, and before that from the driven snow. It meant agitated movement, and did not contain Johnson's concept of "starting location; final location; motion." Nor does this concept fit how the word has moved today, when many people feel "driven," always in motion, precisely without starting and final locations. Only after a word has moved can we see the "concept" or correlations.

4. A situation is inherently *the crossing* of *many* possible further actions and sayings. What it is now consists of many implicit relations to other (real and possible) moments and places. For example, giving someone money *is now* a change in a great many (some unforeseeable) possibilities at other times and places. The situation *is* these possibilities. A situation is a cluster of stories that might further ensue. I say that the stories are *implicitly crossed* because any one that actually happens will change whether and how the others could still ensue. Whatever happens will implicitly change all the others. (See *ECM* and *Thinking beyond Patterns*, A5.)

5. See my discussion of Max Black's theory in "Dwelling."